

# **Exhibit 1**

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

GARY KOOPMANN, TIMOTHY KIDD and	:	
VICTOR PIRNIK, Individually and on Behalf of	:	No. 15 Civ. 7199 (JMF)
All Others Similarly Situated,	:	
	:	
Plaintiffs,	:	
v.	:	
	:	
FIAT CHRYSLER AUTOMOBILES N.V.,	:	
FCA US, LLC, SERGIO MARCHIONNE,	:	
SCOTT KUNSELMAN, MICHAEL DAHL,	:	
STEVE MAZURE, and ROBERT E. LEE,	:	
	:	
Defendants.	:	
	:	
	:	
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Expert Report of Paul A. Gompers, Ph.D.  
February 13, 2018

## Table of Contents

I.	Qualifications .....	1
II.	Assignment .....	2
III.	Background .....	2
IV.	Summary of Opinions .....	9
V.	Dr. Nye Fails to Specify a Class-Wide Damages Methodology That Is Consistent with Plaintiffs’ Theory of Liability.....	11
A.	Event Studies and Damages Calculation .....	12
1.	Event Studies .....	13
2.	Calculating Damages Using an Event Study .....	15
B.	Overview of Dr. Nye’s Assertions Regarding the Calculation of Class-Wide Damages.....	16
C.	Because Dr. Nye’s General Framework Does Not Provide Case-Specific Analyses, It Fails to Show That a Constant Dollar Inflation Band Model Can Be Used to Calculate Damages in a Way That Is Consistent with Plaintiffs’ Theory of Liability.....	18
1.	Because Dr. Nye’s General Framework Does Not Provide Case-Specific Analyses, It Fails to Analyze But-For Disclosures, Which Are Critical to Demonstrate That a Constant Dollar Inflation Band Model Is Consistent with Plaintiffs’ Theory of Liability.....	21
2.	Because Dr. Nye’s General Framework Does Not Provide Case-Specific Analyses, It Fails to Demonstrate That the Key Assumptions Underlying a Constant Dollar Inflation Band Model Hold in This Matter. ....	22
3.	Because Dr. Nye’s General Framework Does Not Provide Case-Specific Analyses, It Fails to Show How an Event Study Could Be Used in this Matter to Determine the Stock Price Declines That Are Associated with the Release of the Alleged Corrective Disclosures. ...	31

## I. Qualifications

1. I am the Eugene Holman Professor of Business Administration at the Harvard Business School. I teach courses and conduct research in corporate finance, the structure and governance of public and private companies, valuation of companies and the behavior of institutional investors, as well as entrepreneurial finance and management, including the venture capital and private equity industry, young start-ups, and high-growth-potential firms. I teach these courses to Ph.D., M.B.A., and Executive Education students. Before joining the Harvard faculty in 1995, I was a member of the faculty at the University of Chicago Graduate School of Business, where I taught entrepreneurial finance from 1993 to 1995. I received an A.B. in Biology from Harvard College in 1987, an M.Sc. in Economics from Oxford University in 1989, and a Ph.D. in Business Economics from Harvard University in 1993.

2. In my career as an academic, I have written numerous case studies and technical notes, and published numerous articles in peer-reviewed finance and economics journals on valuation, venture capital and private equity industries, and entrepreneurial finance. Many of these case studies, notes, and research articles have directly examined financial and valuation issues of companies. I am the coauthor of three books: The Venture Capital Cycle (editions 1 and 2), published by MIT Press, The Money of Invention, published by Harvard Business School Press, and Entrepreneurial Finance: A Casebook, published by John Wiley & Sons, Inc. I am an Associate Editor of the *Journal of Finance*, *Small Business Economics*, and the *Journal of Private Equity*, and a referee for a number of academic journals, including the *Journal of Financial Economics*, the *Journal of Political Economy*, the *Quarterly Journal of Economics*, the *Review of Financial Studies*, and the *Journal of Law and Economics*. I have also served on the boards of directors of several companies, including ZEFER, Mercanteo, and OnTheFrontier.com. My CV is attached as Appendix A to this report.

3. I have served as an expert in a number of legal matters. In these disputes, I have served as an expert on, among other things, whether securities markets were efficient, the valuation of public and private companies, and the factors affecting public company securities prices. These include matters in which I have been asked to analyze alleged damages, as well as numerous matters involving class certification issues. Appendix B contains a list of my testimony over the last four years.

## II. Assignment

4. I have been retained by counsel for Fiat Chrysler Automobiles N.V. (“Fiat Chrysler”<sup>1</sup>) to review and comment on certain analyses provided in the Expert Report of Zachary Nye, Ph.D., filed on December 21, 2017 (“Nye Report”). Specifically, counsel asked me to evaluate whether Dr. Nye provides sufficient evidence to demonstrate that he could develop a class-wide damages model consistent with Plaintiffs’ theory of liability, and to evaluate Dr. Nye’s regression results on certain dates in the Fourth Amended Complaint.<sup>2</sup>

5. For this matter, I am being compensated at my regular hourly rate of \$975. In addition, under my direction, Cornerstone Research has performed research and other support work for me on this matter. My analyses, opinions, and conclusions are based solely on the work performed by me and those under my direction. I have received compensation, and anticipate that I may receive future compensation, from Cornerstone Research that reflects, among other things, my relationship with that firm as an expert on this and other corporate and client matters. My compensation is not contingent upon the conclusions I reach or on the outcome of this matter.

6. A list of documents, data, and other information that I have considered in forming the opinions set forth in my report is attached hereto as Appendix C. I reserve the right to revise my opinions in light of my ongoing review of the materials I have considered, as well as additional materials, including data, documents, and deposition or other testimony that may subsequently come to light, or if I am asked to perform further research or analysis.

## III. Background

7. Fiat Chrysler, through its subsidiaries, designs, engineers, manufactures, distributes, and sells vehicles under the Alfa Romeo, Chrysler, Dodge, Fiat, Jeep, Maserati, Ram, and other brand names.<sup>3</sup> Fiat Chrysler organized its activities around four regional operating

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<sup>1</sup> In this report, where appropriate, “Fiat Chrysler” may also refer to or include subsidiaries of Fiat Chrysler Automobiles N.V.

<sup>2</sup> The period October 13, 2014 through May 22, 2017 represents the class period (“Class Period”) defined in the Fourth Amended Complaint for Violations of the Federal Securities Laws, *Gary Koopmann, Timothy Kidd and Victor Pirnik, Individually and on Behalf of All Others Similarly Situated v. Fiat Chrysler Automobiles N.V., FCA US LLC, Sergio Marchionne, Scott Kunselman, Michael Dahl, Steve Mazure, and Robert E. Lee*, Civ. Action No:15-cv-07199-JMF (S.D.N.Y. August 24, 2017) (“Fourth Amended Complaint”), ¶ 1.

<sup>3</sup> “FCA at a Glance,” Fiat Chrysler Automobiles, <https://www.fcagroup.com/en-US/group/Pages/group.aspx>, accessed on May 17, 2017. Fiat Chrysler’s list of vehicles also included Ferrari until the spin-off of the brand was

segments.<sup>4</sup> Fiat Chrysler's common stock began trading on the New York Stock Exchange ("NYSE") in New York and the Mercato Telematico Azionario ("MTA") in Milan on October 13, 2014.<sup>5</sup>

8. Plaintiffs allege that Fiat Chrysler made a "series of false and misleading statements and material omissions concerning [its] compliance with federally mandated vehicle safety and emissions regulations, as well as [its] internal controls and reported cost of sales, earnings, and earnings before interest and taxes ('EBIT'), provision for warranty and recalls, and warranty/recall costs resulting from its failure to comply with those regulations" during the Class Period.<sup>6</sup>

9. Specifically, Plaintiffs allege that Fiat Chrysler "disregarded its reporting obligations" to the National Highway Traffic Safety Administration ("NHTSA") and "ignored its obligation to timely inform owners of serious defects to their vehicles and to remedy the defects, leading to life threatening consequences."<sup>7</sup> In addition, Plaintiffs allege that Fiat Chrysler "illegally used undisclosed and hidden software to allow excess diesel emissions to go undetected and evade emissions tests."<sup>8, 9</sup>

10. Plaintiffs allege that Fiat Chrysler made false and misleading statements on 26 days during the Class Period. On 25 of these days, Plaintiffs allege Fiat Chrysler made false and misleading statements related to (a) regulatory compliance, such as with safety and/or emissions regulations (on 18 dates); and/or (b) financial information related to costs of recalls (on 13 dates).<sup>10</sup> For example, Plaintiffs allege that Fiat Chrysler made materially false and misleading statements regarding general regulatory compliance in its Form F-1/A

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completed on January 3, 2016. "Separation of Ferrari from FCA Completed," Fiat Chrysler Automobiles Press Release, January 3, 2016.

<sup>4</sup> The first region, NAFTA, includes the United States, Canada, Mexico, and Caribbean islands. The second region, LATAM, includes South and Central America. The third region, EMEA, includes Europe, the Middle East, and Africa. The fourth region, APAC, includes China, Japan, Australia, South Korea, and India. "Brands and Businesses," Fiat Chrysler Automobiles, <https://www.fcagroup.com/en-US/group/brands/Pages/default.aspx>, accessed on May 22, 2017.

<sup>5</sup> Fiat Chrysler Form 20-F filed on February 29, 2016, p. 22.

<sup>6</sup> Fourth Amended Complaint, ¶¶ 1, 3.

<sup>7</sup> Fourth Amended Complaint, ¶ 4.

<sup>8</sup> Fourth Amended Complaint, ¶ 4.

<sup>9</sup> The Fourth Amended Complaint also includes allegations about Fiat Chrysler's failure to report deaths and serious injuries—the corresponding alleged corrective disclosure date is December 9, 2015. Fourth Amended Complaint, ¶¶ 30, 185. However, because Dr. Nye does not examine this corrective disclosure, I have not included it in my analysis of Dr. Nye's proposed damages framework (i.e., whether his proposed damages framework can be used to estimate damages (on a class-wide basis) that are consistent with Plaintiffs' theory of liability and the facts in this case). Nye Report, Exhibit 15.

<sup>10</sup> Fourth Amended Complaint, ¶¶ 260–368. In addition, Plaintiffs allege that Fiat Chrysler made false and misleading statements on five days potentially prior to the Class Period (after on or about May 3, 2013, after on or about September 25, 2013, after on or about September 27, 2013, on August 12, 2014, and after on or about September 12, 2014). Fourth Amended Complaint, ¶¶ 249–259.

filed on November 13, 2014.<sup>11</sup> With respect to alleged misstatements about financial information related to costs of recalls, for example, Plaintiffs reference Fiat Chrysler's Form 6-K filed on October 29, 2014: "Chrysler's failure to properly account [in its Form 6-K filed on October 29, 2014] for its costs and liabilities related to vehicle recalls caused its EBIT, and net profit to be approximately €761 million higher...."<sup>12</sup> Plaintiffs also allege that Fiat Chrysler made a false and misleading statement on one day related to "identified discrepancies in Chrysler's early warning reports of deaths and other serious injuries."<sup>13</sup>

11. To "examin[e] market efficiency," Dr. Nye estimates a regression model that he claims "measure[s] the relationship between Fiat Chrysler's stock returns and 1) changes in market-wide factors that would be expected to impact all stocks; and 2) changes in industry-wide factors that would be expected to impact stocks in the 'Automobile Manufacturing' industry."<sup>14</sup> In particular, Dr. Nye attempts to calculate expected stock price returns for Fiat Chrysler's stock price based on market returns (using the MSCI World Index) and industry-wide returns (using the Bloomberg World Auto Manufacturers Index).<sup>15</sup> He states that the difference between Fiat Chrysler's actual stock price returns and his estimated expected stock price returns (i.e., residual stock price returns) "are a measure of the change in the stock price due to company-specific events...."<sup>16</sup>

12. Exhibit 1 summarizes Dr. Nye's regression results for Fiat Chrysler's stock price returns following 24 of the 26 alleged misstatements in the Class Period.<sup>17, 18</sup> The first column provides the date when the alleged misstatement was made. The second column provides a description of the alleged misstatement according to Plaintiffs. Because some alleged misstatements were made after the market closed, the third column provides the first date that the alleged misstatement could have affected Fiat Chrysler's stock price return. The fourth and fifth columns show Dr. Nye's estimated residual stock price return

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<sup>11</sup> "Our vehicles and the engines that power them must also comply with extensive regional, national and local laws and regulations and industry self-regulations (including those that regulate vehicle safety..., emissions...). We are substantially in compliance with the relevant global regulatory requirements affecting our facilities and products. We constantly monitor such requirements and adjust our operations to remain in compliance." Fourth Amended Complaint, ¶ 275.

<sup>12</sup> Fourth Amended Complaint, ¶ 261.

<sup>13</sup> Fourth Amended Complaint, ¶¶ 330–331.

<sup>14</sup> Nye Report, ¶ 79.

<sup>15</sup> Nye Report, ¶¶ 81–82.

<sup>16</sup> Nye Report, ¶ 83.

<sup>17</sup> I do not include Dr. Nye's regression results for two of the 26 alleged misstatement dates (after on or about December 17, 2014 and after on or about June 25, 2015) because Plaintiffs do not specify the date the alleged misstatements were made. Fourth Amended Complaint, ¶¶ 286–287, 318–319.

<sup>18</sup> The reported results are from Dr. Nye's regression model for Fiat Chrysler's stock traded in the United States.

for that date and whether the residual return was statistically significant. According to Dr. Nye's regression model, three alleged misstatements were followed by a negative statistically significant residual stock price return at the 95% confidence level, one was followed by a negative residual stock price return only statistically significant at the 90% confidence level, five were followed by a positive statistically significant residual stock price return at the 95% confidence level, and 15 were followed by a residual stock price return not statistically significant at even the 90% confidence level. Therefore, there is no evidence based on Dr. Nye's regression analysis that the alleged misstatements caused a statistically significant positive residual stock price return for 19 of the 24 alleged misstatements for which Plaintiffs specify a misstatement date during the Class Period.

13. On two of the five alleged misstatement days in Exhibit 1 that were followed by statistically significant positive residual stock price returns (November 13, 2014 and December 12, 2014), the alleged misstatements do not contain new information.<sup>19</sup> In an efficient market, stock prices only react to new and material information. Therefore, these alleged misstatements should not have affected Fiat Chrysler's stock price in an efficient market.

14. On the other three alleged misstatement days listed in Exhibit 1 that were followed by a statistically significant positive residual stock price return (October 29, 2014, July 30, 2015, and February 29, 2016), public press and analyst report commentary noted that Fiat Chrysler's stock price was affected by information unrelated to the alleged misstatements.

- **October 29, 2014**: Plaintiffs allege that Fiat Chrysler made false and misleading representations regarding its estimated future warranty and recall campaign costs, which inflated its reported EBIT and net profit by approximately €761 million.<sup>20</sup> However, market commentary noted that Fiat Chrysler's stock price was affected by the spin-off of Ferrari. For example, the *Los Angeles Times* noted that "[i]nvestors

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<sup>19</sup> On November 13, 2014, Plaintiffs allege that Fiat Chrysler misstated financials, made a false statement regarding future costs of vehicle warranties and recalls, and made several false statements regarding compliance with regulatory requirements. Fourth Amended Complaint, ¶¶ 265–277. All the allegedly misstated information was previously included in either Fiat Chrysler's Form 6-K filed on November 6, 2014 or Fiat Chrysler's Form F-1 filed on October 10, 2014. On December 12, 2014, Plaintiffs state that Fiat Chrysler "reiterated the same unaudited interim and audited financial information and statements [from November 13, 2014]." Fourth Amended Complaint, ¶¶ 284–285. As the Fourth Amended Complaint notes, the alleged misstatements were already previously known by the market.

<sup>20</sup> Fourth Amended Complaint, ¶¶ 260–261.



heartily endorsed...news of Ferrari's spinoff, sending FCA's stock up nearly 12% to \$10.85...."<sup>21</sup>

- **July 30, 2015**: Plaintiffs claim that Fiat Chrysler made false and misleading representations about "identified discrepancies in Chrysler's early warning reports of deaths and other serious injuries."<sup>22</sup> However, market commentary noted that Fiat Chrysler's stock price was affected by the overall positive earnings announcement. For example, *Societe Generale* noted that "FCA's adjusted NAFTA EBIT of €1,327m in Q2 2015 for a 7.7% margin (vs 4.9% in Q2 2014) comprehensively beat the Inquiry consensus of €770m (4.8% margin) and SGe €817m (5.0% margin), triggering almost a 6% increase in the stock price."<sup>23</sup>
- **February 29, 2016**: Plaintiffs allege that Fiat Chrysler made false and misleading representations regarding its emissions compliance.<sup>24</sup> This alleged misstatement was made after market close on February 29, 2016; therefore, March 1, 2016 is the first day that the alleged misstatement could have affected Fiat Chrysler's stock price return. Market commentary noted that Fiat Chrysler's stock price was affected by strong sales for Fiat Chrysler. For example, *Reuters News* noted that "Shares of Fiat rose 4.1 percent to \$7.13 after the automaker said February U.S. sales rose 12 percent."<sup>25</sup>

15. Dr. Nye testified in his deposition that his "understanding is that this is a price maintenance case" and that he would be "surprised" if any of the alleged misstatements had any effect on Fiat Chrysler's stock price.<sup>26</sup> Dr. Nye also stated that he has not "analyzed the informational impact" on alleged misstatement dates.<sup>27</sup> Furthermore, Dr. Nye testified that he has "no opinion on when any of the inflation from the disclosures in [his] event study impacted the share price."<sup>28</sup>

16. Plaintiffs allege seven dates on which alleged truths came out causing Fiat Chrysler's stock price to decline: (a) with respect to Fiat Chrysler's non-compliance with safety regulations, Plaintiffs allege two corrective disclosures (July 26, 2015 and October 28,

<sup>21</sup> "Fiat Chrysler to spin off Ferrari sports car brand," *Los Angeles Times*, October 30, 2014.

<sup>22</sup> Fourth Amended Complaint, ¶¶ 330–331.

<sup>23</sup> "NAFTA surprises but mixed picture elsewhere," *Societe Generale*, July 31, 2015.

<sup>24</sup> Fourth Amended Complaint, ¶¶ 347–354.

<sup>25</sup> "US STOCKS-Wall St set to open higher on oil rise, stimulus hopes," *Reuters News*, March 1, 2016.

<sup>26</sup> Dr. Nye testified that his understanding that this is a price maintenance case is based on his reading of the complaint and the type of allegations at issue. Deposition of Zachary Nye, Ph.D., February 2, 2018 ("Nye Deposition"), 52:17–53:16.

<sup>27</sup> Nye Deposition, 51:21–52:5.

<sup>28</sup> Nye Deposition, 126:7–10.

2015); and (b) with respect to Fiat Chrysler’s non-compliance with emissions regulations, Plaintiffs allege five corrective disclosures (May 23, 2016, January 12, 2017, February 6, 2017, February 7, 2017, and May 23, 2017).

- **July 26, 2015**: NHTSA announced a Consent Order concerning 23 FCA US LLC (“FCA US”) recalls and a \$105 million civil penalty for “failing to adequately remedy defective vehicles within a reasonable time through repair, replacement, or repurchase[;]...for failing to timely notify owners of vehicle defects; for failing to timely submit copies to NHTSA of communications relating to recalls; and for failing to provide NHTSA with timely, accurate, and complete information relating to vehicle defects and recalls.”<sup>29, 30, 31</sup>
- **October 28, 2015**: Fiat Chrysler released its financial results for the third quarter of 2015 including a €761 million pre-tax charge for estimated future recall campaign costs for vehicles sold in prior periods in NAFTA.<sup>32, 33, 34</sup>
- **May 23, 2016**: Plaintiffs claim that “it was reported that several tests by the German motor transport authority KBA had found evidence that the exhaust treatment system in some of Chrysler’s models would switch itself off after 22 minutes, which is just 2 minutes after the standard 20 minute emissions test normally run by regulators.”<sup>35, 36</sup>
- **January 12, 2017**: The U.S. Environmental Protection Agency (“EPA”) and the California Air Resources Board (“CARB”) “each issued a notice of violation to

<sup>29</sup> Fourth Amended Complaint, ¶¶ 323–327. Consent Order, In re: FCA US LLC AQ14-003 (Recall Nos. 13V-528 and 13V-529), NHTSA Recall Nos. 13V-038, 13V-252, 13V-527, 14V-154, 14V-373, 14V-391, 14V-438, 14V-567, 14V-634, 14V-635, 14V-749, 14V-795, 14V-796, 14V-817, 15V-041, 15V-046, 15V-090, 15V-114, 15V-115, 15V-178, and 15V-290, United States Department of Transportation, National Highway Traffic Safety Administration, July 26, 2015 (“NHTSA Consent Order issued on July 26, 2015”), ¶ 18.

<sup>30</sup> Moreover, for three recalls (13V-038, 13V-527, and 13V-529), FCA US was required to revise its program for remedying the defect by offering to repurchase affected vehicles from eligible owners at a premium. For another recall (13V-252), FCA US had to offer owners incentives—a \$100 gift card and/or a \$1,000 over fair market value trade-in incentive—to participate in the recall program. FCA US also agreed to improve its recall processes and procedures. NHTSA Consent Order issued on July 26, 2015, ¶ 35, Attachment A.B, Attachment B.B.13–14.

<sup>31</sup> Dr. Nye finds July 27, 2015 to have a statistically significant negative residual stock price return at the 90% confidence level—but not at the 95% confidence level—for the stock traded in the United States. Nye Report, Exhibit 15. There was no residual stock price return available for July 26, 2015 due to the fact that it was a Sunday.

<sup>32</sup> Fourth Amended Complaint, ¶ 335. Fiat Chrysler Form 6-K filed on October 28, 2015, p. 2.

<sup>33</sup> Dr. Nye finds October 28, 2015 to have a statistically significant negative residual stock price return at the 95% confidence level for the stock traded in the United States. Nye Report, Exhibit 15.

<sup>34</sup> It is my understanding that the alleged corrective disclosure on October 28, 2015 is no longer at issue because the Court dismissed claims “based on Defendants’ reserve estimates and related statements.” Opinion and Order, *Victor Pirnik et al. v. Fiat Chrysler Automobiles N.V. et al.*, Civ. Action No. 15-cv-07199-JMF (S.D.N.Y. October 5, 2016), p. 24. However, because Dr. Nye mentions October 28, 2015 as an alleged corrective disclosure, I include a discussion of the date for completeness. Nye Report, ¶ 71.

<sup>35</sup> Fourth Amended Complaint, ¶ 356.

<sup>36</sup> Dr. Nye finds May 23, 2016 to have a statistically significant negative residual stock price return at the 95% confidence level for the stock traded in the United States. Nye Report, Exhibit 15.

Chrysler and FCA US for installing and failing to disclose engine management software that resulted in increased emissions from [some] vehicles.”<sup>37, 38</sup>

- **February 6, 2017**: The “French authorities announce[d] they were referring Chrysler for prosecution following an investigation of the levels of emissions of NOx pollutants produced by its diesel vehicles.”<sup>39, 40</sup>
- **February 7, 2017**: Plaintiffs allege that “a report by Italy’s transport ministry...revealed that Chrysler’s vehicles were allowed to skip key tests for illegal engine software....”<sup>41, 42</sup>
- **May 23, 2017**: The U.S. Department of Justice (“DOJ”) “announced the filing of a complaint[, on behalf of the EPA,] in the Eastern District of Michigan asserting that Defendant Chrysler, FCA US LLC and other entities violated federal law because of its undisclosed defeat devices on its Jeep Grand Cherokee and Ram 1500 diesel vehicles.”<sup>43, 44</sup>

17. The Fourth Amended Complaint’s sections titled “The Truth About Chrysler’s NHTSA Violations Begins to Emerge as Defendants Continue To Make Materially False and Misleading Statements” and “The Truth About Chrysler’s Emissions Violations Begins to Emerge” contain seven additional dates that are not alleged misstatements and Dr. Nye does not examine in his Exhibit 15.<sup>45</sup> Exhibit 2 summarizes Dr. Nye’s regression results for Fiat Chrysler’s residual stock price returns following these seven dates. The first column provides the date mentioned in the Fourth Amended Complaint regarding an event. The second column provides a description of the event according to Plaintiffs. Because some events occurred after the market closed, the third column provides the first date that the event could have affected Fiat Chrysler’s stock price returns. The fourth and

<sup>37</sup> Fourth Amended Complaint, ¶ 364.

<sup>38</sup> Dr. Nye finds January 12, 2017 to have a statistically significant negative residual stock price return at the 95% confidence level for the stock traded in the United States. Nye Report, Exhibit 15.

<sup>39</sup> Fourth Amended Complaint, ¶ 369.

<sup>40</sup> Dr. Nye claims that Fiat Chrysler’s stock price reaction began on February 6, 2017 in United States trading, and extended into February 7, 2017. Nye Report, footnote 99. Dr. Nye does not find a statistically significant residual stock price return on February 6, 2017 for the stock traded in the United States. Dr. Nye finds February 7, 2017 to have a statistically significant negative residual stock price return at the 95% confidence level for the stock traded in the United States. In addition, Dr. Nye finds February 6–7, 2017 to have a statistically significant negative two-day residual stock price return at the 95% confidence level for the stock traded in the United States. Nye Report, Exhibit 15.

<sup>41</sup> Fourth Amended Complaint, ¶ 371.

<sup>42</sup> Dr. Nye finds February 7, 2017 to have a statistically significant negative residual stock price return at the 95% confidence level for the stock traded in the United States. Nye Report, Exhibit 15.

<sup>43</sup> Fourth Amended Complaint, ¶ 38.

<sup>44</sup> Dr. Nye finds May 23, 2017 to have a statistically significant negative residual stock price return at the 95% confidence level for the stock traded in the United States. Nye Report, Exhibit 15.

<sup>45</sup> Fourth Amended Complaint, ¶¶ 323–376.

fifth columns show Dr. Nye's estimated residual stock price return for that date and whether the residual return was statistically significant. According to Dr. Nye's analysis, none of these events were followed by a statistically significant residual stock price return.

#### **IV. Summary of Opinions**

18. According to Dr. Nye's regression model, only five of the 24 alleged misstatements during the Class Period for which Plaintiffs specified a misstatement date were followed by a statistically significant positive residual stock price return. Of those five alleged misstatements, two do not contain new information. In an efficient market, these alleged misstatements should not have affected Fiat Chrysler's stock price. Following the other three alleged misstatement dates, public press and analyst report commentary noted that Fiat Chrysler's stock price was affected by information unrelated to the alleged misstatements. There is also no evidence, based on Dr. Nye's regression analysis, that the events on the seven additional dates in the "The Truth About Chrysler's NHTSA Violations Begins to Emerge as Defendants Continue To Make Materially False and Misleading Statements" and "The Truth About Chrysler's Emissions Violations Begins to Emerge" sections of the Fourth Amended Complaint that Dr. Nye does not examine in his Exhibit 15 caused a statistically significant residual stock price return.

19. Dr. Nye fails to show that he could develop a damages methodology that is consistent with Plaintiffs' theory of liability and the facts of this case. Based on my prior experience with damages models, the potential case-specific issues in this matter make the development of such a model a very challenging task.

20. In his expert report, Dr. Nye states that he would employ the "residual returns" stemming from an "event study" analyzing the alleged corrective disclosures to determine "price inflation."<sup>46</sup> However, he only provides high-level considerations about the implementation of such a methodology without specifying critical information that would show that his damages model, in this specific case, is consistent with the allegations made by Plaintiffs and can be used to estimate damages on a class-wide basis. Similarly, during his deposition, Dr. Nye did not provide additional information to demonstrate that he could develop a methodology to calculate damages on a class-wide basis that is consistent with Plaintiffs' theory of liability. He simply stated that he offers "a general economic

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<sup>46</sup> See Section V.B.

framework for quantifying per-share damages on a classwide basis”<sup>47</sup> without demonstrating that this general framework is actually applicable in this matter.

21. To illustrate the point that a case-specific analysis is necessary in order to demonstrate that a damages methodology is applicable to a specific case, I analyze a constant dollar inflation band damages model, which is consistent with Dr. Nye’s high-level considerations. A constant dollar inflation band model estimates the amount of inflation on a specific date based on stock price declines that occurred after this date. I show that the general framework provided by Dr. Nye does not provide case-specific analyses that are necessary to demonstrate that this model is consistent with Plaintiffs’ theory of liability and the facts of this case.

22. Dr. Nye’s general framework is not case specific and does not provide any insight into how a “but-for world” in this matter could be developed. Developing the but-for world is a necessary step in creating a damages model. As a result, this general framework cannot establish whether key assumptions associated with a constant dollar inflation band model hold in this matter:

- The but-for disclosures could have occurred before or at the beginning of the Class Period.
- The informational content of the but-for disclosures related to violations of safety regulations would have been similar to the informational content of the corresponding alleged corrective disclosures (July 26, 2015 and October 28, 2015).
- The informational content of the but-for disclosures related to violations of emissions regulations would have been similar to the informational content of the corresponding alleged corrective disclosures (May 23, 2016, January 12, 2017, February 6, 2017, February 7, 2017, and May 23, 2017).

23. In addition, Dr. Nye’s general framework does not provide any information as to how an event study (or any other technique) can determine the stock price declines that are associated with the release of the alleged corrective disclosures when there is confounding information.

24. I show that a constant dollar inflation band model—which is consistent with Dr. Nye’s general statements—is unlikely to be consistent with Plaintiffs’ theory of liability and the facts of this case. My analysis demonstrates the need to provide case-specific analyses to establish the adequacy of a damages model. Even if Dr. Nye intends to

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<sup>47</sup> Nye Deposition, 120:25–121:3.

develop a damages model other than a constant dollar inflation band model, he still needs to provide a case-specific analysis to show that such a damages model is consistent with Plaintiffs' theory of liability and the facts of this case. This absence of a case-specific analysis undermines his opinion that it is possible to calculate damages on a class-wide basis in this matter.

**V. Dr. Nye Fails to Specify a Class-Wide Damages Methodology That Is Consistent with Plaintiffs' Theory of Liability.**

25. It is my understanding that Plaintiffs need to specify a methodology for calculating damages on a class-wide basis that is consistent with their theory of liability in this matter. Such a model would measure the damages attributable to the statements or omissions for which Plaintiffs claim Fiat Chrysler is liable, while excluding any loss attributable to other causes.<sup>48</sup> Even if Plaintiffs at present are not required to calculate per-share damages based on their theory of liability, an analysis of their theory of liability and the facts in this case is necessary to demonstrate that it is possible to develop a damages model that is economically sound and can be used to estimate damages on a class-wide basis.

26. In his expert report, Dr. Nye fails to conduct such an analysis. Dr. Nye states that he would employ the "residual returns" stemming from an "event study" analyzing the alleged corrective disclosures to determine "price inflation."<sup>49</sup> However, he only provides high-level considerations about the implementation of such a methodology without specifying critical information that would show that his damages model, in this specific case, is consistent with the allegations made by Plaintiffs and can be used to estimate damages on a class-wide basis. High-level considerations are insufficient to demonstrate that Dr. Nye could specify a methodology that is applicable to a specific set of facts and allegations.

27. Similarly, during his deposition, Dr. Nye did not provide additional information to demonstrate that he could develop a methodology to calculate damages on a class-wide basis that is consistent with Plaintiffs' theory of liability. He simply stated that he offers "a general economic framework for quantifying per-share damages on a classwide basis"<sup>50</sup>

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<sup>48</sup> *Comcast Corp. v. Behrend*, 133 S. Ct. 1426, 1431 (2013).

<sup>49</sup> See Section V.B.

<sup>50</sup> Nye Deposition, 120:25–121:3.

without demonstrating that this general framework is actually applicable in this matter. For example, he mentioned a series of tools like an event study, a discounted cash flow analysis, and an earnings response model without analyzing the limitations of these tools.<sup>51</sup> These tools may not be able to adequately take into account the constraints represented by Plaintiffs' theory of liability and the facts in this case.

28. To illustrate that Dr. Nye's general consideration of damages is insufficient, I will analyze below a damages model that is often used by plaintiffs' experts and is consistent with the high-level considerations Dr. Nye provides in his report—a constant dollar inflation band damages model. I will show that the nature of this matter presents several obstacles for constructing such a damages model based upon “residual returns” stemming from an “event study” analyzing the alleged corrective disclosures. This demonstrates that the general statements Dr. Nye makes in his report and deposition are insufficient to establish that it is possible to develop a damages model that is consistent with Plaintiffs' theory of liability and the facts in this case. Even if Dr. Nye intends to develop a damages model other than a constant dollar inflation band model, he still needs to provide a case-specific analysis to show that such a damages model is reliable and can be used to estimate damages on a class-wide basis. The absence of such a specific analysis in Dr. Nye's report or deposition undermines his opinion about whether damages for investors who purchased the stock during the Class Period can be calculated on a class-wide basis.

29. This section proceeds in three parts: Section V.A provides an overview of what an event study is and an illustration of how damages can be calculated using an event study under a simple set of assumptions about the theory of liability and the facts of the case; Section V.B summarizes Dr. Nye's proposed general framework for calculating damages; and Section V.C explains how a constant dollar inflation band model—which is consistent with Dr. Nye's high-level considerations regarding damages—is unlikely to be consistent with Plaintiffs' theory of liability and the facts in this case.

#### **A. Event Studies and Damages Calculation**

30. In this section, I first explain what an event study is. Then, for illustrative purposes, I describe how an event study may be used to calculate damages in a setting where the theory of liability and the related facts are simple.

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<sup>51</sup> Nye Deposition, 124:18–125:12.



## 1. Event Studies

31. Economists use event studies to measure the effect of an economic event on the value of a firm. In most applications, the goal is to estimate the effect of an event on the price of a class of securities such as common equity.<sup>52</sup> Although there is not a unique methodology, the following steps are usually implemented when conducting an event study for a single security:

- a. **Event definition**: The first step in an event study is to define the event of interest and to determine the period of time over which the event at issue may have affected the stock price (i.e., the event window). For example, in the context of securities litigation, the event is the alleged corrective disclosure, and its impact on the stock price is typically analyzed using daily stock price returns. To the extent that multiple pieces of information are released on the same day, it is critical to identify the piece of information that represents the corrective disclosure and the pieces of information that are unrelated to the allegations (i.e., confounding information).
- b. **Residual stock price return associated with the event**: The residual stock price return is the portion of the stock price return that may have been caused by the event at issue. The residual stock price return is the difference between the actual return over the event window and the return that would have been expected if the event had not occurred. Economists need to develop a model to estimate this expected return. A statistical tool called regression analysis can be used to perform this estimation. This regression analysis measures the typical relationship between the company's stock price movement and the stock price movement of the market and/or industry to which the company belongs. Based on this typical relationship between the company's stock price movement and its industry/market movement, an economist can determine the expected return on any given day by using that day's market and/or industry return to calculate the expected return. The difference between the actual return and the expected return (i.e., the residual stock price return) represents the portion of the stock price return that may be associated with the impact of all the pieces of information that are company-specific and released over an event window, and not only the impact of the event at issue. Therefore, to the extent that the event at

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<sup>52</sup> John Y. Campbell, Andrew W. Lo, and A. Craig MacKinlay, *The Econometrics of Financial Markets* (Princeton University Press, 1997), p. 149.



issue is not the only piece of information released during the event window, the residual stock price return is insufficient to determine the portion of the stock price return associated exclusively with the event at issue. In these circumstances, the regression analysis needs to be replaced by or supplemented with other tools. The size of the residual stock price return associated with the event at issue may be used to quantify the impact of the event on the stock price.

- c. **Estimation procedure:** When the model to determine the expected return has been chosen, the parameters of this model must be estimated. To do so, an estimation window is used. This estimation window is different from the event window. For example, the coefficients of the regression analysis may be estimated by using the stock price, market, and industry information during a period of time that precedes the event window and/or follows the event window. It is important to use an estimation window that can determine the typical relationship between market and industry returns and the return for the company in question when there is no contamination by potentially allegation-related events.
- d. **Testing procedure:** It is critical for the economist to determine the hypothesis to be tested with respect to the event at issue. Such a hypothesis could be that the market reacted to this event. If this was the hypothesis, the economist tests whether the residual stock price return associated with the event at issue is statistically different from zero (i.e., statistically significant). When this is the case, it is then possible to conclude that the market likely reacted to the event and the stock price movement was unlikely to be the result of random daily price movements.<sup>53</sup> To perform this test, it is necessary to set the statistical threshold that will determine whether the residual stock price return is statistically significant. The 95% confidence level is typically used to perform this statistical test.<sup>54</sup> For example, the *Reference Manual on Scientific Evidence* indicates that “[i]n practice, statistical analysts typically use levels of 5% or 1%. The 5% level is the most common in social science, and an analyst who speaks of significant results without specifying the threshold probably is using this figure.”<sup>55</sup>

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<sup>53</sup> As mentioned above, if there is confounding information unrelated to the allegations released during the event window, then one cannot simply conclude that a stock price decline was caused by the allegations even when a residual is statistically significant.

<sup>54</sup> When using a 95% confidence level, one concludes the residual stock price return is likely to be the result of a stock price reaction to the event at issue (i.e., the residual stock price return is statistically significant) if one would expect the magnitude of the residual stock price return to occur only 5% or less of the time if it was due to random chance.

<sup>55</sup> David H. Kaye and David A. Freedman, “Reference Guide on Statistics” in *Reference Manual on Scientific Evidence*, Third Edition (The National Academies Press, 2011), p. 251.

Based on my experience in the context of litigation, expert witnesses typically use the 95% confidence level.

## 2. Calculating Damages Using an Event Study

32. In my experience, when event studies are used by plaintiffs to calculate damages, plaintiffs' experts generally employ a "backcasting" methodology to determine inflation based on the stock price declines estimated by the event study. This backcasting methodology is consistent with Dr. Nye's general framework of using the "residual returns" stemming from an "event study" analyzing the alleged corrective disclosures to determine "price inflation." But as discussed later in this report, Dr. Nye's general framework does not provide case-specific analyses and, therefore, it fails to demonstrate that it is possible to develop a damages methodology that is consistent with Plaintiffs' theory of liability and the facts of this case. Based on my prior experience with damages models, the potential case-specific issues in this matter make the development of such a model a very challenging task.

33. In this section, I briefly describe a constant dollar inflation band model, which is a backcasting methodology. I address the issues with using this approach in this specific case in Section V.C below.

34. Inflation is the difference between the actual stock price and a stock's "true" value, that is, the stock's value if the market had knowledge of the allegedly concealed facts—also known as the "but-for price."<sup>56</sup> For each class member, the difference between the actual market price and the true value—that is, the amount of inflation—at the time of purchase and the time of sale can be used to calculate damages if there is an alleged corrective disclosure between these dates.

35. To determine inflation using a constant dollar inflation band model in a simple case—with a single alleged misrepresentation and a subsequent alleged corrective disclosure without confounding information—an event study using a regression analysis based on daily stock price returns is performed to determine the residual stock price return associated with the alleged corrective disclosure. That residual stock price return is then translated into a dollar amount, which is then used as a measure of the amount of

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<sup>56</sup> A but-for price is also referred to as the "equivalent disclosure" price. See, e.g., Bradford Cornell and R. Gregory Morgan, "Using Finance Theory to Measure Damages in Fraud on the Market Cases," *UCLA Law Review*, Vol. 37 (1990), p. 894.

“inflation” for the period between the alleged misrepresentation and the alleged corrective disclosure. Sometimes experts propose to keep the inflation constant in percentage terms. In this configuration, inflation on every day in the period between the alleged misrepresentation and the alleged corrective disclosure is calculated by multiplying the actual stock price by the percentage represented by the residual stock price return on the alleged corrective disclosure date.

36. In cases with multiple corrective disclosures, this methodology requires that a separate inflation “band” be calculated for each period between alleged corrective disclosures and from the beginning of the class period to the first corrective disclosure. The amount of inflation on any day in the class period is equal to the sum of the stock price declines attributable to the alleged corrective disclosures that occurred after the date on which the amount of inflation is estimated. This is a backcasting methodology: the amount of inflation on a specific date is based upon stock price declines that occurred after this date.<sup>57</sup>

#### **B. Overview of Dr. Nye’s Assertions Regarding the Calculation of Class-Wide Damages**

37. Dr. Nye purports to specify a class-wide damages methodology in Section VII of his report (comprising five paragraphs). However, the Nye Report’s Section VII only contains *general statements* about how to develop a damages model.

38. First, Dr. Nye claims that “[a]lthough damages, if any, for each individual Class member may vary, the method of calculating damages is common to the Class.”<sup>58</sup>

39. Then, Dr. Nye states that “[a]n investor incurs damages when a security is acquired at a price that is inflated as a result of false or misleading statements or omissions, provided that a later corrective disclosure and/or materialization of a concealed risk causes the price of that security to decline.”<sup>59</sup> Dr. Nye states price inflation can occur when “material misrepresentations and/or omissions on or before the date of purchase...remain

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<sup>57</sup> A backcasting methodology is also applicable if the inflation is considered constant in percentage terms and could be referred to as a constant percentage inflation band model. In this configuration, the percentage on any day of the class period representing inflation is a function of the residual stock price returns representing the stock price declines on the alleged corrective disclosure dates that occurred after the date on which the amount of inflation is estimated. This percentage representing the inflation stays constant between the beginning of the class period and the first corrective disclosure, and between corrective disclosures.

<sup>58</sup> Nye Report, ¶ 72.

<sup>59</sup> Nye Report, ¶ 73.

uncorrected in whole or in part at the time of purchase.”<sup>60</sup> If price inflation also exists at the time the security is sold, Dr. Nye explains that “[d]amages may be mitigated” by the amount of “inflation remaining at the date of sale.”<sup>61</sup>

40. Moreover, Dr. Nye claims that one can measure price inflation on a class-wide basis by using an event study to analyze “the change in a security’s price caused by a corrective disclosure and/or the materialization of a concealed risk” and not by other factors.<sup>62</sup> He adds that “[a]n event study can be used to isolate Company-specific price movement caused by the revelation of the alleged fraud from price movement caused by other factors. Other factors can include changes in market and industry conditions or the dissemination of material non-fraud-related, Company-specific information.”<sup>63</sup> He further claims that “[a]fter isolating the price impact of the alleged misstatements and omissions, one can estimate the price inflation due to the alleged fraud for each day during the Class Period, and on a Class-wide basis for each member of the Class.”<sup>64</sup>

41. Given that the amount of inflation is defined on every day of the Class Period, Dr. Nye provides the following information to calculate damages for class members:

- a. “For each Class member, damages incurred on a security acquired during the Class Period and retained through the end of the Class Period are equal to the amount of inflation at purchase.”<sup>65</sup>
- b. “For a security acquired during the Class Period and sold later in the Class Period, damages are the price inflation at purchase minus the price inflation at sale.”<sup>66</sup>
- a. “[A] security purchased during the Class Period and sold before the first corrective disclosure and/or materialization of a concealed risk is ineligible for damages. Similarly, a security that is both purchased and sold between two sequential disclosures of corrective information is ineligible for damages.”<sup>67</sup>

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<sup>60</sup> Nye Report, ¶ 73.

<sup>61</sup> Nye Report, ¶ 73.

<sup>62</sup> Nye Report, ¶ 74.

<sup>63</sup> Nye Report, ¶ 74.

<sup>64</sup> Nye Report, ¶ 74.

<sup>65</sup> Nye Report, ¶ 75.

<sup>66</sup> Nye Report, ¶ 75.

<sup>67</sup> Nye Report, ¶ 75.

42. Dr. Nye states that any damages calculation may need to be modified to conform to the 90-day lookback provision contained in the Private Securities Litigation Reform Act of 1995.<sup>68</sup>

**C. Because Dr. Nye’s General Framework Does Not Provide Case-Specific Analyses, It Fails to Show That a Constant Dollar Inflation Band Model Can Be Used to Calculate Damages in a Way That Is Consistent with Plaintiffs’ Theory of Liability.**

43. As explained in the previous section, Dr. Nye’s general framework in his expert report to calculate class-wide damages would quantify the price impact of the alleged corrective disclosures by employing an event study based on a regression analysis. A backcasting methodology, such as the constant dollar inflation band model described in Section V.A.2, is consistent with the general framework provided by Dr. Nye.

44. Dr. Nye’s proposed general framework is insufficient to show that it is possible to use a constant dollar inflation band model based on an event study that is consistent with Plaintiffs’ theory of liability and the facts in this case. This type of damages methodology relies on specific assumptions, as discussed below, and because Dr. Nye’s general framework does not provide case-specific analyses, it fails to show that these assumptions are compatible with Plaintiffs’ theory of liability and the specific facts of this case. As explained in Section V.A.2, the constant dollar inflation band model assumes that the amount of inflation during the Class Period only depends on the residual stock price declines upon the release of the alleged corrective disclosures that occurred after the day on which the amount of inflation is estimated. It implies that the amount of inflation (a) remains constant between the beginning of the Class Period and the first alleged corrective disclosure, and between the alleged corrective disclosures; and (b) is equal to the residual stock price declines following the release of these alleged corrective disclosures.

45. From an economic perspective, it is necessary to develop and analyze a “but-for world” in order to demonstrate that a constant dollar inflation band model is applicable to a specific theory of liability and set of facts.

46. For a proper economic but-for world, an economist needs to specify, among other things, the information that should have been disclosed and when such information should have been disclosed—as defined by the plaintiffs—rather than the alleged

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<sup>68</sup> Nye Report, ¶ 76.

misrepresentations. These alternative disclosures are called “but-for disclosures.” After defining the but-for disclosures, an economist can estimate the impact that they would have had on the stock price to determine the so-called but-for price—that is, the stock’s value if the market had knowledge of the allegedly concealed facts. Then, an economist can calculate the amount of inflation as the difference between the actual stock price and the but-for stock price.

47. An analysis of the informational content and the timing of the but-for disclosures is also required to determine whether at least three key assumptions, which are necessary for using a constant dollar inflation band model, are consistent with Plaintiffs’ theory of liability and the facts of this case:

- a. The but-for disclosures would have occurred before or at the beginning of the Class Period—or would have no impact on the but-for stock price—so that the amount of inflation remains constant between the beginning of the Class Period and the first alleged corrective disclosure, and between the alleged corrective disclosures. In contrast, the release of an economically significant but-for disclosure after the beginning of the Class Period and before the first alleged corrective disclosure, for example, may affect the but-for price because it would release information that may affect investors’ expectations regarding Fiat Chrysler’s future performance and, as a result, the amount of inflation would not be constant in this band.
- b. The informational content of the but-for disclosures would have been similar to that of the alleged corrective disclosures. If this assumption holds, then the price impacts of the but-for disclosures and the price impacts of the alleged corrective disclosures may be the same and, therefore, the stock price declines following the release of the alleged corrective disclosures may be used as a proxy for the price impacts of the but-for disclosures. In contrast, for example, an alleged corrective disclosure may be the realization of a risk, whereas the but-for disclosure would only be a disclosure of the risk. For illustration, consider an alleged corrective disclosure where a company says it missed its earnings guidance by \$1. The but-for disclosure may be that the company might miss its earnings guidance by \$1. These two disclosures would most likely have different impacts on the company’s stock price.

- c. The price impacts of the but-for disclosures and the alleged corrective disclosures with similar informational content would have been identical even though they would have been made at different times and possibly in different economic environments. Indeed, for example, the same information may have a different price impact if the announcement is made during a recession or a period of growth.

48. Because Dr. Nye's general framework only offers high-level considerations regarding the use of an event study and does not provide any details regarding the methodology that could be employed to develop an event study in this matter, it does not show how it would be possible to apportion residual stock price returns on the alleged corrective disclosure dates for confounding information after controlling for the market and industry factors. This consideration is critical in order to demonstrate that it is possible to isolate the price impact related to the correction of only the specific alleged misstatements and omissions.

49. In summary, because Dr. Nye's general framework does not provide case-specific analyses, it fails to address these multiple issues and, therefore, fails to show how a constant dollar inflation band model relying on an event study—which is consistent with Dr. Nye's general framework—can be used to calculate class-wide damages in a manner that is consistent with Plaintiffs' theory of liability and the facts of this case. Thus, it is necessary to provide a specific analysis to demonstrate whether a model can be used to calculate damages on a class-wide basis. Dr. Nye fails to do so.

50. In addition, Dr. Nye was unable to clarify in his deposition what damages methodology he will eventually propose. Indeed, he testified that he did not at all analyze damages.<sup>69</sup> Again, the goal of such analyses is not to calculate damages but to demonstrate that it is possible to calculate damages (on a class-wide basis) in a way that is consistent with Plaintiffs' theory of liability and the facts in this case.

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<sup>69</sup> See, e.g., Nye Deposition, 128:12–14 (“I haven’t done a loss causation or damages analysis.”).



**1. Because Dr. Nye's General Framework Does Not Provide Case-Specific Analyses, It Fails to Analyze But-For Disclosures, Which Are Critical to Demonstrate That a Constant Dollar Inflation Band Model Is Consistent with Plaintiffs' Theory of Liability.**

51. As discussed above, the development of a proper but-for world requires a detailed analysis of the allegations, including alleged misstatements, alleged omissions, alleged corrective disclosures, and the facts of the case.

52. A damages model can be biased because it may not be suitable for the facts and allegations in a particular case. For example, Cornell and Morgan (1990) emphasize the need for a detailed analysis of the alleged misstatements, omissions, and corrective disclosures to evaluate whether a specific model may be able to measure damages related to alleged misstatements or omissions.

[T]he limits of the explanatory power of the model must be understood. Part II of this Article demonstrates that substantial factual analysis must precede the use of the model. Without a detailed understanding of the information misrepresented or omitted, the information eventually revealed, the difference between these two sets of information, and the other information available to the market, litigants and lawyers cannot be confident that what the...model measures is really the economic effect of the fraud. Part II shows that different calculations...may over- or under-estimate damages because both the comparable index approach and the event study approach involve potential bias. The extent of this bias again depends on the facts of the case; it cannot be determined by financial economic theorizing.<sup>70</sup>

53. Therefore, to demonstrate that a constant dollar inflation band model—based on an event study—can be used to calculate damages on a class-wide basis, it is critical to analyze all the facts and allegations, and to develop a proper but-for world. Without doing so, it is impossible to evaluate whether a constant dollar inflation band model accurately calculates the amount by which Fiat Chrysler's stock was inflated on any given day.

54. Dr. Nye's general framework fails to provide analyses about these critical aspects of a damages model: what Fiat Chrysler should have disclosed and when it should have disclosed it. The non-specific nature of Dr. Nye's general framework was confirmed in Dr. Nye's deposition when he testified that he does not have any opinion on the content

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<sup>70</sup> Bradford Cornell and R. Gregory Morgan, "Using Finance Theory to Measure Damages in Fraud on the Market Cases," *UCLA Law Review*, Vol. 37 (1990), pp. 923–924.



and timing of but-for disclosures.<sup>71</sup> Furthermore, Dr. Nye testified that he has “no opinion on when any of the inflation from the disclosures in [his] event study impacted the share price.”<sup>72</sup> Thus, this general framework cannot support that Plaintiffs’ theory of liability and the facts of this case are consistent with a constant dollar inflation band damages model in this matter.

**2. Because Dr. Nye’s General Framework Does Not Provide Case-Specific Analyses, It Fails to Demonstrate That the Key Assumptions Underlying a Constant Dollar Inflation Band Model Hold in This Matter.**

55. As explained above, the use of a constant dollar inflation band model requires that certain assumptions be compatible with Plaintiffs’ theory of liability and the facts of this case. The facts and allegations related to the multiple recalls and emissions tests at issue are likely to violate these assumptions. Dr. Nye’s general framework does not analyze these issues.

56. The first assumption is that the but-for disclosures would have occurred before or at the beginning of the Class Period. In this matter, as I will discuss below, it is likely that a but-for world would include numerous but-for disclosures made at different times—including times after the beginning of the Class Period—each potentially having a separate impact on the but-for stock price. As a result, the amount of inflation may not be constant between the beginning of the Class Period and the first alleged corrective disclosure, or between the alleged corrective disclosures.

57. The second assumption is that the informational content of these but-for disclosures would have been similar to the informational content of the corresponding alleged corrective disclosures and, therefore, the price impacts of the but-for disclosures and the alleged corrective disclosures may have been similar. As demonstrated below, it is unlikely that this assumption holds in this matter. Importantly, if the second assumption does not hold, then there is no need to analyze the third assumption discussed in ¶ 47 above because the third assumption matters only if the second assumption holds.

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<sup>71</sup> Nye Deposition, 128:9–14.

<sup>72</sup> Nye Deposition, 126:7–10.

58. Thus, because these assumptions are unlikely to be compatible with Plaintiffs' theory of liability and the facts of this case, a constant dollar inflation band model is unlikely to be appropriate in this matter.

**a) Because Dr. Nye's General Framework Does Not Provide Case-Specific Analyses, It Fails to Demonstrate That the But-For Disclosures Would Have Occurred Before or at the Beginning of the Class Period.**

59. The first assumption underlying the use of a constant dollar inflation band model is that the *entire* alleged "truth" could have been disclosed by Fiat Chrysler before or at the beginning of the Class Period. This alleged truth covers the different recalls at issue and the corresponding violations of safety regulations. In particular, according to Plaintiffs, Fiat Chrysler allegedly failed to (a) timely initiate some recalls, (b) timely inform some owners of serious defects to their vehicles, (c) timely remedy some defects, and (d) timely send copies of notifications to NHTSA, among other allegations.<sup>73</sup> Because Dr. Nye's general framework does not provide case-specific analyses, it fails to demonstrate that the but-for disclosures revealing the alleged truth could have been made before or at the beginning of the Class Period.

60. In order to define the timing of the but-for disclosures, it is necessary to determine when the alleged violations of safety regulations related to each recall at issue were known or knowable by Fiat Chrysler. This determination requires a thorough examination of each of the 24 recalls specified in the Fourth Amended Complaint.

61. For example, recalls 14V-749 (non-compliance with the safety standard for vehicle controls and displays) and 15V-115 (defective fuel pump relay that can cause a vehicle to stall without warning) were initiated after the beginning of the Class Period based on the filing date of their respective 573 Reports on November 21, 2014 and February 24, 2015.<sup>74</sup> Because Fiat Chrysler had only five business days to submit a 573 Report once it knew of a safety defect<sup>75</sup>—and there is no allegation that Fiat Chrysler was late in initiating these recalls after it knew about the issues—it is likely that any but-for disclosures related to these recalls would have occurred after the beginning of the Class Period.

<sup>73</sup> See, e.g., Fourth Amended Complaint, ¶¶ 149, 164, 167, and 317.

<sup>74</sup> Part 573 Safety Recall Report 14V-749, National Highway Traffic Safety Administration, November 21, 2014; Part 573 Safety Recall Report 15V-115, National Highway Traffic Safety Administration, February 24, 2015.

<sup>75</sup> NHTSA Consent Order issued on July 26, 2015, p. 2.

62. In addition, even if some recalls were initiated before the beginning of the Class Period, some related issues occurred after the Class Period began. For example, recall 14V-634 was initiated on October 7, 2014 when Fiat Chrysler filed the corresponding 573 Report.<sup>76</sup> However, according to Plaintiffs, Fiat Chrysler allegedly violated safety regulations when, in December 2014, it provided NHTSA with a number of vehicles affected by this recall that was inconsistent with the initial 573 Report and did not file an amended 573 Report to document this change.<sup>77</sup> In addition, Plaintiffs allege that Fiat Chrysler waited 67 days after it began mailing owner notifications in February 2015 to submit a copy of the owner notification to NHTSA instead of submitting it before mailing the notification to owners as required.<sup>78, 79</sup> Another example is recall 14V-391, initiated on July 1, 2014.<sup>80</sup> Plaintiffs allege that Fiat Chrysler failed to submit to NHTSA copies of dealer communications in April and May 2015.<sup>81</sup>

63. These examples show that because it is unlikely that all the information regarding the violations of safety regulations was known by Fiat Chrysler at the beginning of the Class Period, some but-for disclosures would likely have occurred after the beginning of the Class Period. In addition, the number of required but-for disclosures is unclear because multiple recalls are at issue and each of these recalls has its own timeline regarding Fiat Chrysler's alleged lack of compliance with safety regulations. As a result, there could be multiple but-for disclosures for some recalls, or, alternatively, a but-for disclosure could cover a subset of recalls and a few but-for disclosures could cover all the recalls. These considerations are essential for a damages model. Because Dr. Nye's general framework does not provide specific analyses about these issues, it cannot show that it is possible to develop a constant dollar inflation band model consistent with Plaintiffs' theory of liability.

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<sup>76</sup> Part 573 Safety Recall Report 14V-634, National Highway Traffic Safety Administration, October 7, 2014.

<sup>77</sup> Fourth Amended Complaint, ¶ 173.

<sup>78</sup> Fourth Amended Complaint, ¶¶ 86, 164.

<sup>79</sup> NHTSA Consent Order issued on July 26, 2015, p. 3.

<sup>80</sup> Part 573 Safety Recall Report 14V-391, National Highway Traffic Safety Administration, July 1, 2014.

<sup>81</sup> Fourth Amended Complaint, ¶ 167.

**b) Because Dr. Nye's General Framework Does Not Provide Case-Specific Analyses, It Fails to Demonstrate That the Informational Content of the But-For Disclosures Related to Violations of Safety Regulations Would Have Been Similar to the Informational Content of Alleged Corrective Disclosures on July 26, 2015 and October 28, 2015.**

64. As discussed above, the second assumption underlying the use of a constant dollar inflation band model is that the informational content of the alleged corrective disclosures is similar to that of the but-for disclosures. A review of the facts and allegations in this case shows that, with respect to Fiat Chrysler's non-compliance with safety regulations, it is unlikely that the but-for disclosures and the alleged corrective disclosures would have been similar.

65. As discussed in detail in the following subsections, because Dr. Nye's general framework does not provide case-specific analyses, it fails to consider whether the informational content of the July 26, 2015 and October 28, 2015 alleged corrective disclosures could be the same in the but-for disclosures. Therefore, his general framework fails to establish that the second assumption holds in this matter and that a constant dollar inflation band model can be used.

**(1) Alleged Corrective Disclosure: July 26, 2015**

66. On July 26, 2015, NHTSA released its Consent Order in which Fiat Chrysler (a) was fined \$105 million for its failure to comply with safety regulations regarding 23 recalls, (b) agreed to implement a repurchase program for three recalls and to provide additional financial incentives for another recall, and (c) agreed to improve its recall processes.<sup>82</sup> However, Fiat Chrysler could not have indicated in a but-for disclosure at the beginning of the Class Period (or before the date of the first alleged corrective disclosure) that it was certain that its lack of compliance regarding safety regulations would lead to a Consent Order by NHTSA that would include the three actions described above.

67. Fiat Chrysler could have disclosed the safety regulations compliance issues regarding specific recalls only when it became aware of them. It is unclear whether Fiat Chrysler could or should have disclosed additional information. Fiat Chrysler may have been able to disclose the risks related to this non-compliance, but it could not have indicated that

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<sup>82</sup> NHTSA Consent Order issued on July 26, 2015, ¶¶ 18, 35, Attachment A.

these risks would realize with certainty. For example, a risk that Fiat Chrysler could have potentially disclosed is an exposure to a fine by NHTSA. However, it is unclear if and when Fiat Chrysler should have determined that the number and the nature of its violations of safety regulations were substantial enough to disclose to investors the risk of a fine.

68. Similarly, Fiat Chrysler may have been able to disclose that there was a risk that its lack of compliance with safety regulations could lead NHTSA to order a repurchase program or additional financial incentives for recalls; however, Fiat Chrysler could not have indicated with certainty that (a) NHTSA would order these programs, or (b) a specific recall would be the target of such a program.

69. One would expect the potential price impact from Fiat Chrysler disclosing the risk of receiving a NHTSA Consent Order to be different than the price impact of the actual NHTSA Consent Order. This is because the disclosure of the risk still leaves the possibility that the NHTSA Consent Order will not occur. For example, Dr. Nye was asked in his deposition to compare the information and expected price impact between the actual NHTSA Consent Order and a public press release on May 18, 2015 that informed the market that NHTSA might take action against Fiat Chrysler. Not surprisingly, Dr. Nye agreed that he would expect the market impact from a disclosed risk to be different than the realization of the risk.<sup>83</sup>

70. Therefore, there is no evidence that the informational content of the July 26, 2015 alleged corrective disclosure could have been disclosed before this day. Dr. Nye's general framework, however, does not provide case-specific analyses and does not consider this issue.

## **(2) Alleged Corrective Disclosure: October 28, 2015**

71. On October 28, 2015, Fiat Chrysler disclosed a €761 million charge for future recall campaign costs as well as additional financial information.<sup>84</sup> However, there is no evidence that the information related to the second alleged corrective disclosure regarding

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<sup>83</sup> Nye Deposition, 88:16–89:14 (“Q. You testified earlier that the fine for NHTSA was out of the blue. Doesn't this press release [from May 18, 2015] inform the market that -- of the possibility of a fine and buyback? A. This says concerns, not that you are fined and that you have to buy back, what, a hundred thousand vehicles, potentially to the tune of \$4 billion. So no, I do not think that this informs the market of the outcome that occurred on [July 26].... Q. The press release expressly references buyback or replacement of affected vehicles, right? A. It says the agency could order...buyback or replacement of affected vehicles, not that they are going to, and that it could cost billions of dollars.”).

<sup>84</sup> Fiat Chrysler Automobiles Form 6-K filed on October 28, 2015, p. 2.

the failure to comply with safety regulations—Fiat Chrysler’s charge of €761 million for future recall campaign costs—could have been disclosed at the beginning of the Class Period or even before June 30, 2015, the end of the second quarter of 2015.

72. First, the €761 million charge was related to vehicles sold prior to June 30, 2015,<sup>85</sup> and was likely related in part to some recalls that had not been initiated at the time of the disclosure but were anticipated by Fiat Chrysler. Therefore, prior to the end of the second quarter of 2015, it may not have been possible for Fiat Chrysler to have all the information about the vehicles that could be involved in future recall campaigns in order to provide these potential future recall campaign costs.

73. Second, to the extent that the €761 million charge also related to the recalls at issue in the NHTSA Consent Order, Fiat Chrysler could not have known with certainty at the beginning of the Class Period (a) which recalls would be concerned by repurchase programs and which recalls would be concerned by additional financial incentives if regulatory actions were taken, and/or (b) that NHTSA would take actions that would increase the costs for these recalls. The regulatory environment was important in this reassessment of recall costs. Indeed, Fiat Chrysler indicated that this charge was caused, among other reasons, by changes in the regulatory environment that had been evolving in recent periods but had crystallized for Fiat Chrysler during the third quarter of 2015.<sup>86</sup>

74. In summary, there is no evidence that the informational content of the October 28, 2015 alleged corrective disclosure could have been disclosed before this day. Again, Dr. Nye’s general framework does not provide case-specific analyses and does not consider this issue.

**c) Because Dr. Nye’s General Framework Does Not Provide Case-Specific Analyses, It Fails to Demonstrate That the Informational Content of the But-For Disclosures Related to Alleged Violations of Emissions Regulations Would Have Been Similar to the Informational Content of the Alleged Corrective Disclosures on May 23, 2016, January 12, 2017, February 6, 2017, February 7, 2017, and May 23, 2017.**

75. Similar to the discussion above regarding the alleged corrective disclosures of violations of safety regulations, a review of the facts and allegations related to emissions violations indicates that it is unlikely that the informational content of the alleged

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<sup>85</sup> Fiat Chrysler Automobiles Form 6-K filed on October 28, 2015, p. 2.

<sup>86</sup> FCA.MI – Q3 2015 Fiat Chrysler Automobiles NV Earnings Call, October 28, 2015, p. 4.

corrective disclosures about violations of emissions regulations and that of the corresponding but-for disclosures would have been similar. Because Dr. Nye's general framework does not provide case-specific analyses, it fails to address this issue, and thus cannot demonstrate that a constant dollar inflation band model can be used in this matter.

76. Specifically, Plaintiffs allege that Fiat Chrysler used "undisclosed and hidden software to allow excess diesel emissions to go undetected and evade emissions tests."<sup>87</sup> However, as discussed below, the information released on the five alleged corrective disclosure dates—May 23, 2016, January 12, 2017, February 6, 2017, February 7, 2017, and May 23, 2017—does not provide definitive evidence or conclusions that Fiat Chrysler used such an alleged undisclosed software or a so-called defeat device.<sup>88</sup> The information provided in these five alleged corrective disclosures is only comprised of allegations, and the procedures to determine whether Fiat Chrysler had used an alleged defeat device were still ongoing.

- a. **May 23, 2016:** An article in Germany's *Bild* newspaper reported that some tests by Germany's transport regulator had found evidence in some of Fiat Chrysler's models of a software that shut off emissions reduction technology after 22 minutes<sup>89</sup> and that German regulators suspected Fiat Chrysler of using illegal software to cheat on emissions tests.<sup>90</sup> However, there was a disagreement between Germany and Italy regarding this issue. In a letter Germany sent to the European Commission in late August 2016, Germany stated that it "does not share the Italian car type approval authority's opinion that the device to switch off exhaust treatment systems is used to protect the engine...."<sup>91</sup>
- b. **January 12, 2017:** A notice of violations of the Clean Air Act issued by the EPA alleged that FCA US had failed to disclose a software that could alter how a vehicle emits air pollution. This notice also mentioned that the EPA and CARB had both initiated investigations based on FCA US's alleged actions. In addition, the EPA was also investigating whether the auxiliary emissions control device constituted a defeat device.<sup>92</sup> Again, this announcement discusses allegations and that investigations into

<sup>87</sup> Fourth Amended Complaint, ¶ 277.

<sup>88</sup> According to Plaintiffs, "[a] defeat device is a piece of engine management software designed specifically to circumvent the emissions testing process. It can turn emissions controls on during the test, and off when the car is in normal use. Such systems are banned." Fourth Amended Complaint, ¶ 214.

<sup>89</sup> "BRIEF-FCA has no comment on Bild report, says complies with emissions rules," *Reuters*, May 23, 2016.

<sup>90</sup> "EUROPE MARKETS: European Shares End Lower As Bayer, Fiat Come Under Pressure," *Dow Jones*, May 23, 2016.

<sup>91</sup> "Germany accuses Fiat of using illegal device in diesel engines-magazine," *Reuters*, September 1, 2016.

<sup>92</sup> "EPA Notifies Fiat Chrysler of Clean Air Act Violations," EPA News Release, January 12, 2017.



these issues had begun. No definitive conclusion was reached as to whether FCA US had used alleged defeat devices.

- c. **February 6, 2017**: French investigators referred Fiat Chrysler for possible prosecution over abnormal emissions of nitrogen oxide pollutants from some of its diesel engines.<sup>93</sup> Again, it appears that the procedure to determine whether Fiat Chrysler had used alleged defeat devices was still ongoing.
- d. **February 7, 2017**: According to the Italian transport ministry's own report, Fiat Chrysler vehicles were allowed to skip key tests for alleged illegal engine software during Italy's main emissions-cheating investigation.<sup>94</sup> However, the Italian transport ministry spokesperson indicated that a "new definitive version" of the report had been drafted to include more data for Fiat Chrysler models following further tests and would be published in the coming weeks.<sup>95</sup> Again, at that point, no definitive evidence was provided to show that Fiat Chrysler had used an alleged defeat device.
- e. **May 23, 2017**: The DOJ filed a civil lawsuit, on behalf of the EPA, accusing FCA US of illegally using software to bypass emission controls in approximately 104,000 diesel vehicles sold between 2013 and 2016.<sup>96</sup> However, the EPA Complaint only alleged that FCA US failed to disclose certain software that allowed illegal excess emissions; it did not demonstrate that Fiat Chrysler used a "defeat device" designed to deceive regulators.<sup>97</sup> Furthermore, Fiat Chrysler said in a press release that it was "disappointed that the DOJ-ENRD [Environment and Natural Resources Division] has chosen to file this lawsuit" and that it intended "to defend itself vigorously, particularly against any claims that the Company engaged in any deliberate scheme to install defeat devices to cheat US emissions tests."<sup>98</sup> It is my understanding that the process to determine whether the allegations in the EPA Complaint are true is still ongoing.

77. As explained above, according to Plaintiffs, Fiat Chrysler used a defeat device: "Chrysler...illegally used undisclosed and hidden software to allow excess diesel emissions to go undetected and evade emissions tests."<sup>99</sup> As a result, a but-for disclosure

<sup>93</sup> "French investigators refer Fiat Chrysler emissions case to prosecutor," *Reuters*, February 6, 2017.

<sup>94</sup> "EXCLUSIVE-Italian diesel probe omitted key tests for Fiat Chrysler models," *Reuters*, February 7, 2017.

<sup>95</sup> "EXCLUSIVE-Italian diesel probe omitted key tests for Fiat Chrysler models," *Reuters*, February 7, 2017.

<sup>96</sup> Complaint, *United States of America v. FCA US LLC, Fiat Chrysler Automobiles N.V., V.M. Motori S.P.A., and V.M. North America, Inc.* (E.D. Mich. May 23, 2017) ("EPA Complaint"), ¶ 2.

<sup>97</sup> Neal E. Boudette, "U.S. Claims Software Deceived Emissions Testing," *The New York Times*, May 24, 2017.

<sup>98</sup> "FCA US Statement in Response to DOJ-ENRD Filing," Fiat Chrysler Automobiles Press Release, May 23, 2017.

<sup>99</sup> Fourth Amended Complaint, ¶ 4.



would have revealed that Fiat Chrysler had cheated on certain emissions tests, which is a piece of information different from alleging that Fiat Chrysler had failed to disclose certain software that allegedly allowed excess emissions.

78. Indeed, the but-for disclosure would have indicated that Fiat Chrysler cheated and would potentially have provided information such as the number of vehicles at issue and the financial consequences of this wrongdoing to prevent any speculation from the market in order to minimize the stock price impact of this but-for disclosure. It is also plausible that Fiat Chrysler would have discussed the matter with the regulator before making the but-for disclosure and would have provided specific information about the regulator actions and the corresponding financial consequences in order to, again, prevent speculation from the market and to minimize the price impact.

79. In contrast, the alleged corrective disclosures are just allegations about Fiat Chrysler cheating on emissions tests. Some of them are about using defeat devices—or not disclosing software that may represent defeat devices—and do not include evidence that Fiat Chrysler actually cheated. This information is clearly different from the information that would be included in a but-for disclosure consistent with Plaintiffs’ theory of liability.

80. In addition, many of the alleged corrective disclosures do not provide the market with the necessary information to understand the potential financial consequences of Fiat Chrysler’s alleged wrongdoing. For example, when the notice for violations of the Clean Air Act was released on January 12, 2017, some analysts mentioned that insufficient information was available in order to understand the potential consequences of the allegations. An equity analyst from Bank of America stated that “details/information, including a potential financial impact...have yet to be revealed.”<sup>100</sup> Similarly, the filing of the EPA Complaint created uncertainty in the market because, as explained by a Barclays analyst, “the length of time [for the DOJ to take any action after the EPA filed a notice of violation in mid-January] may mean that this case isn’t as obvious as the [Volkswagen] one” and “[the costs associated with] civil and criminal charges are almost impossible to accurately assess....”<sup>101</sup>

81. Moreover, certain alleged corrective disclosures also include information that could not have been disclosed by Fiat Chrysler at the beginning of the Class Period. For

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<sup>100</sup> John Murphy, “Certainly not positive news, but stock reaction seems overdone,” *Bank of America*, January 12, 2017.

<sup>101</sup> “Fiat Chrysler Automobiles: US Government Files Civil Complaint Against FCA,” *Barclays*, May 23, 2017.

example, Fiat Chrysler could not have indicated that it was certain that the DOJ would file a lawsuit, on behalf of the EPA, but could only have indicated that it was a possibility.

82. Therefore, the informational content of the but-for disclosures related to the alleged violations of emissions regulations would have been different than that of the corresponding alleged corrective disclosures. Because Dr. Nye's general framework does not provide case-specific analyses, it cannot support that a constant dollar inflation band model is consistent with Plaintiffs' theory of liability and the facts in this case.

**3. Because Dr. Nye's General Framework Does Not Provide Case-Specific Analyses, It Fails to Show How an Event Study Could Be Used in this Matter to Determine the Stock Price Declines That Are Associated with the Release of the Alleged Corrective Disclosures.**

83. If stock price declines upon alleged corrective disclosures are the basis for a damages calculation, it is necessary for any class-wide methodology to control for confounding information in order to isolate losses that are associated with the correction of only the specific alleged misstatements and omissions.

84. Although Dr. Nye acknowledges this potential issue,<sup>102</sup> his general framework does not provide case-specific analyses to demonstrate how it could be possible to adjust for confounding information in this case. His general framework does not provide any information about the technique that could be used in this case to remove the price impact of confounding information from the stock price declines that occurred on the alleged corrective disclosure dates.

85. To illustrate the importance of Dr. Nye needing to show that he can develop a damages methodology that can control for confounding news, I analyze in this section two potential issues that are specific to this matter.

86. First, the alleged corrective disclosure on October 28, 2015 is related to Fiat Chrysler's disclosed charge of €761 million for future recall campaign costs in its earnings announcement for the third quarter of 2015. However, Fiat Chrysler also disclosed in this earnings announcement other financial information that could have affected its stock price on this day, such as information about margins. Some analysts mentioned that this

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<sup>102</sup> "Other factors can include changes in market and industry conditions or the dissemination of material non-fraud-related, Company-specific information." Nye Report, ¶ 74.

information about margins may have had an impact on the stock price on this day. For example, an analyst from Credit Suisse stated that the “market hoped for more after GM/Ford reported sequential margin improvements....”<sup>103</sup> These disclosures appear unrelated to Plaintiffs’ allegations, and Dr. Nye’s general framework does not provide any analyses to show how it would be possible to evaluate the impact of these disclosures on Fiat Chrysler’s stock price and, if needed, how to remove this impact in order to isolate the price impact of the alleged corrective disclosure that is relevant to Plaintiffs’ theory of liability.

87. Second, regarding the February 7, 2017 alleged corrective disclosure, if Fiat Chrysler could not have disclosed that its vehicles were allowed to skip key tests during Italy’s main emissions-cheating investigation because Fiat Chrysler was not involved in this alleged decision made by the Italian regulator, the alleged corrective disclosure on February 7, 2017 is actually not a corrective disclosure. Assuming that Dr. Nye is correct in that the alleged corrective disclosures on February 6, 2017 and February 7, 2017 both affected Fiat Chrysler’s stock price on February 7, 2017,<sup>104</sup> the February 7, 2017 announcement will be confounding information, and it will be necessary to remove the price impact of this announcement to isolate the price impact of the February 6, 2017 announcement.

88. As explained in Section V.A.1 above, the difference between the actual stock price returns and the expected stock price returns (or the residual returns) on October 28, 2015 and February 7, 2017 may reflect the impact on the stock price of all the pieces of information released on these days, including the confounding information.<sup>105</sup> Therefore, this difference may not measure the economic loss (or damages) associated exclusively with the alleged corrective disclosure.

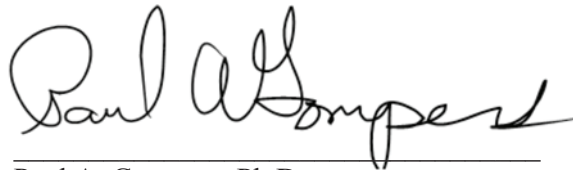
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<sup>103</sup> Alexander Haissl et al., “Solid 3Q15, but Market Hoped for More,” *Credit Suisse*, October 28, 2015.

<sup>104</sup> Dr. Nye purports, but does not establish, that the market took two days to incorporate the alleged corrective disclosure on February 6, 2017. Nye Report, footnote 99.

<sup>105</sup> It may also be necessary, for example, to analyze whether Fiat Chrysler’s residual stock price return on May 23, 2017 is connected to the allegations underlying the EPA Complaint. In his deposition, Dr. Nye testified that the DOJ stated in a press release that the allegations in the EPA Complaint “are consistent with those set forth in [the] notice of violation that EPA issued to FCA US LLC and FCA NV on January 12, 2017.” Nye Deposition, 100:12–20.

Executed this 13<sup>th</sup> day of February 2018

A handwritten signature in black ink, appearing to read "Paul A. Gompers". The signature is written in a cursive, flowing style with a long horizontal stroke at the end.

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Paul A. Gompers, Ph.D.

**Exhibit 1**

**Alleged Misstatements**  
**Statistical Significance of Residual Stock Price Returns<sup>[1]</sup>**

Alleged Misstatement Date	Events Related to Alleged Misstatement According to the Complaint	Potential Impact Date	Dr. Nye's Regression Results <sup>[2]</sup>		Complaint Paragraphs
			Residual Return	Confidence Level <sup>[3]</sup>	
10/29/14	Fiat Chrysler issued a press release and filed a Form 6-K with the SEC in which financial information was provided.	10/29/14 <sup>[4]</sup>	11.7%	100.0% **	¶¶ 260–261
11/5/14	Fiat Chrysler filed a Form 6-K with the SEC in which financial information was reiterated in an appended Interim Report.	11/5/14 <sup>[5]</sup>	0.1%	4.1%	¶¶ 262–263
11/13/14	Fiat Chrysler filed a Form F-1/A with the SEC in which Fiat Chrysler reiterated financial information and that its vehicles comply with regulations.	11/13/14 <sup>[6]</sup>	4.9%	99.3% **	¶¶ 265–277
11/20/14	Defendant Kunselman provided a statement to the Senate Committee on Commerce, Science, and Transportation.	11/20/14 <sup>[7]</sup>	-0.6%	27.2%	¶¶ 278–279
11/26/14	Fiat Chrysler filed a Form F-1/A with the SEC in which Fiat Chrysler reiterated financial information and that its vehicles comply with regulations.	11/26/14 <sup>[8]</sup>	-0.9%	40.7%	¶¶ 280–282
12/4/14	Fiat Chrysler filed a Form F-1/A with the SEC in which financial information was reiterated.	12/5/14 <sup>[9]</sup>	2.3%	80.4%	¶ 283
12/12/14	Fiat Chrysler issued a press release and filed two prospectuses on Form 424B4 with the SEC in which financial information was reiterated.	12/12/14 <sup>[10]</sup>	3.5%	95.1% **	¶¶ 284–285
1/28/15	Fiat Chrysler issued a press release and filed a Form 6-K with the SEC in which financial information was provided. Fiat Chrysler also held an investor call.	1/28/15 <sup>[11]</sup>	-0.9%	39.4%	¶¶ 288–293

**Exhibit 1**

**Alleged Misstatements**  
**Statistical Significance of Residual Stock Price Returns<sup>[1]</sup>**

Alleged Misstatement Date	Events Related to Alleged Misstatement According to the Complaint	Potential Impact Date	Dr. Nye's Regression Results <sup>[2]</sup>		Complaint Paragraphs
			Residual Return	Confidence Level <sup>[3]</sup>	
3/5/15	Fiat Chrysler filed a Form 20-F with the SEC in which Fiat Chrysler provided financial information, and reiterated some financial information and that its vehicles comply with regulations.	3/5/15 <sup>[12]</sup>	0.3%	14.5%	¶¶ 294–303
3/9/15	Fiat Chrysler filed a Form 6-K with the SEC in which Fiat Chrysler stated a commitment to safety and reiterated financial information in an appended Annual Report.	3/10/15 <sup>[13]</sup>	-0.1%	6.5%	¶¶ 304–305
4/29/15	Fiat Chrysler issued a press release and filed a Form 6-K with the SEC in which financial information was provided.	4/29/15 <sup>[14]</sup>	-4.8%	99.2% **	¶¶ 306–307
5/7/15	Fiat Chrysler filed a Form 6-K with the SEC in which financial information was reiterated in an appended Interim Report.	5/8/15 <sup>[15]</sup>	-0.9%	39.7%	¶¶ 308–311
5/19/15	Fiat Chrysler issued a statement stating Fiat Chrysler's commitment to safety and cooperation with NHTSA, and filed a Form F-4 with the SEC in which financial information and commitments to safety were reiterated.	5/20/15 <sup>[16]</sup>	0.8%	36.7%	¶¶ 312–315
6/17/15	Fiat Chrysler issued a press release and filed a prospectus on Form 424B4 <sup>[17]</sup> with the SEC in which Fiat Chrysler reiterated financial information and that its vehicles comply with regulations.	6/18/15 <sup>[18]</sup>	1.1%	46.7%	¶¶ 316–317
7/28/15 <sup>[19]</sup>	Fiat Chrysler issued a press release regarding the NHTSA Consent Order.	7/27/15 <sup>[20]</sup>	-3.1%	92.1% *	¶¶ 328–329

**Exhibit 1**

**Alleged Misstatements**  
**Statistical Significance of Residual Stock Price Returns<sup>[1]</sup>**

Alleged Misstatement Date	Events Related to Alleged Misstatement According to the Complaint	Potential Impact Date	Dr. Nye's Regression Results <sup>[2]</sup>		Complaint Paragraphs
			Residual Return	Confidence Level <sup>[3]</sup>	
7/30/15	Fiat Chrysler held an earnings call and addressed questions regarding NHTSA recalls.	7/30/15 <sup>[21]</sup>	7.3%	100.0% **	¶¶ 330–331
8/6/15	Fiat Chrysler filed a Form 6-K with the SEC in which Fiat Chrysler provided financial information and reiterated that its vehicles comply with regulations.	8/6/15 <sup>[22]</sup>	0.5%	20.5%	¶¶ 320–322, ¶¶ 332–333
9/22/15 <sup>[23]</sup>	A Fiat Chrysler spokesperson denied any use of defeat devices and confirmed that it was working with the EPA and CARB to ensure vehicle compliance.	9/22/15 <sup>[24]</sup>	-1.9%	71.5%	¶¶ 361–362
12/2/15	Fiat Chrysler's Head of Powertrain Coordination stated that the Company's internal audit was extensive and that the engines in certain vehicles did not use defeat devices.	12/2/15 <sup>[25]</sup>	-1.4%	58.4%	¶¶ 339–340
1/27/16	Fiat Chrysler CEO stated in a quarterly earnings call that Fiat Chrysler did not use software to cheat emissions tests.	1/27/16 <sup>[26]</sup>	-2.8%	88.3%	¶¶ 343–344
2/2/16	Fiat Chrysler issued a press release stating Fiat Chrysler's internal review had confirmed that its diesel engines did not have devices used to detect laboratory testing.	2/2/16 <sup>[27]</sup>	-1.5%	60.0%	¶¶ 345–346
2/29/16	Fiat Chrysler issued a press release and filed a Form 20-F with the SEC in which Fiat Chrysler reiterated financial information and that its vehicles complied with regulations.	3/1/16 <sup>[28]</sup>	4.1%	97.9% **	¶¶ 347–354

**Exhibit 1**

**Alleged Misstatements**  
**Statistical Significance of Residual Stock Price Returns<sup>[1]</sup>**

Alleged Misstatement Date	Events Related to Alleged Misstatement According to the Complaint	Potential Impact Date	Dr. Nye's Regression Results <sup>[2]</sup>		Complaint Paragraphs
			Residual Return	Confidence Level <sup>[3]</sup>	
5/23/16	In response to a German news report that Fiat Chrysler had used illegal emissions software, a Fiat Chrysler spokesperson stated that its vehicles were compliant with existing emissions rules.	5/23/16 <sup>[29]</sup>	-4.8%	99.3% **	¶¶ 356–359
1/12/17	Fiat Chrysler stated that it believed its emission control systems met regulatory requirements in response to EPA and CARB violations.	1/12/17 <sup>[30]</sup>	-9.9%	100.0% **	¶¶ 364–368

Source: Fourth Amended Complaint; Nye Report Backup; SEC Edgar; *Takata Airbag Defects: Hearing before the Senate Commerce, Science, and Transportation Committee*, Senate, 113th Cong. 2 (2014), <https://www.c-span.org/video/?322852-1/hearing-takata-airbag-defects>, accessed 2/13/18.

## Note:

- [1] The Fourth Amended Complaint contains two alleged misstatements during the Class Period in addition to the 24 alleged misstatements listed in this exhibit. However, the Fourth Amended Complaint does not state when the two alleged misstatements were made. Fourth Amended Complaint, ¶¶ 286, 318.
- [2] Dr. Nye's regression results are from his model for Fiat Chrysler's stock traded in the United States.
- [3] "\*\*\*" denotes that a residual return is statistically significant at the 95% confidence level according to Dr. Nye's regression model. "\*\*" denotes that a residual return is statistically significant at the 90% confidence level according to Dr. Nye's regression model.
- [4] The press release was publicly available before the Form 6-K. The press release with the title "FCA Board of Directors' Meeting: Third Quarter 2014 Results" was published by *PR Newswire* at 8:28 AM ET on 10/29/14.
- [5] The press release with financial results was publicly available before the Form 6-K. The press release with the title "Chrysler Group Reports Third-Quarter 2014 Net Income of \$611 Million, Up 32 Percent from a Year Ago" was published by *PR Newswire* at 10:30 AM ET on 11/5/14. Fiat Chrysler's Form 6-K was accepted by the SEC at 8:33 PM on 11/5/14 and contained additional financial information. According to Dr. Nye's regression model, Fiat Chrysler's residual stock price return is not statistically significant on 11/5/14 or 11/6/14.
- [6] Fiat Chrysler's Form F-1/A was accepted by the SEC at 6:05 AM ET on 11/13/14.
- [7] Defendant Kunselman provided a statement to the Senate Committee on Commerce, Science, and Transportation at a hearing that began at 10:00 AM ET on 11/20/14.
- [8] Fiat Chrysler's Form F-1/A was accepted by the SEC at 9:10 PM ET on 11/25/14.
- [9] Fiat Chrysler's Form F-1/A was accepted by the SEC at 4:58 PM ET on 12/4/14.
- [10] Fiat Chrysler's Form 424B4s were accepted by the SEC at 9:41 PM and 9:43 PM ET on 12/11/14.
- [11] The press release was publicly available before the Form 6-K. The press release with the title "FCA Closed 2014 With Strong Performance in Line With Full-year Guidance" was published by *PR Newswire* at 8:05 AM ET on 1/28/15. Fiat Chrysler's Earnings Call for Q4 2014 began at 2:00 PM GMT on 1/28/15.
- [12] Fiat Chrysler's Form 20-F was accepted by the SEC at 1:02 PM ET on 3/5/15.
- [13] Fiat Chrysler's Form 6-K was accepted by the SEC at 4:54 PM ET on 3/9/15.
- [14] The press release was publicly available before the Form 6-K. The press release with the title "FCA closed Q1 with net revenues of €26.4 billion, up 19% and adjusted EBIT at €800 million, up 22%. Net industrial debt was €8.6 billion, up €0.9 billion. Full year guidance confirmed" was published by *PR Newswire* at 7:51 AM ET on 4/29/15.



**Exhibit 1**

**Alleged Misstatements**  
**Statistical Significance of Residual Stock Price Returns<sup>[1]</sup>**

Alleged Misstatement Date	Events Related to Alleged Misstatement According to the Complaint	Potential Impact Date	Dr. Nye's Regression Results <sup>[2]</sup>		Complaint Paragraphs
			Residual Return	Confidence Level <sup>[3]</sup>	
					[15] Fiat Chrysler's Form 6-K was accepted by the SEC at 5:02 PM ET on 5/7/15. The only new alleged information on this day was captured in a footnote in Fiat Chrysler's financial statements, accepted by the SEC after market hours. Fourth Amended Complaint, ¶¶ 308–311 and Fiat Chrysler Form 6-K filed 5/7/15.
					[16] Fiat Chrysler's Form F-4 was accepted by the SEC at 4:23 PM on 5/19/15. I was unable to verify the timing of the statement with the title "NHTSA Recall Scrutiny" that was published by Fiat Chrysler on 5/19/15. According to Dr. Nye's regression model, Fiat Chrysler's residual stock price return is not statistically significant on 5/19/15 or 5/20/15.
					[17] The Fourth Amended Complaint claims that on 6/17/15 Fiat Chrysler "...issued a press release and filed with the SEC a prospectus on Form 424B4...." Fourth Amended Complaint, ¶ 316. However, a Form 424B3, not 424B4, was filed with the SEC on 6/17/15. See footnote 18.
					[18] Fiat Chrysler's Form 423B3 was accepted by the SEC at 3:55 PM ET on 6/17/15. Neither 6/17/15 nor 6/18/15 have statistically significant residual stock price returns according to Dr. Nye's regression results.
					[19] The Fourth Amended Complaint claims that on 7/28/15 Chrysler stated "contrary to certain reports, FCA US does not expect that the net cost of providing these additional alternatives will be material to its financial position, liquidity or results of operations." Fourth Amended Complaint, ¶ 328. However, this statement was made on 7/27/15. See footnote 20.
					[20] The press release with the title "FCA Clarifies Scope of Remedies in NHTSA Consent Order" was published by <i>PR Newswire</i> at 1:55 PM ET on 7/27/15.
					[21] The transcript of Fiat Chrysler's Earnings Call for Q2 2015 states that the call began at 2:00 PM GMT on 7/30/15.
					[22] Fiat Chrysler's Form 6-K was accepted by the SEC at 8:11 AM ET on 8/6/15.
					[23] The Fourth Amended Complaint claims that on 9/22/16 a Chrysler spokesperson stated "FCA U.S. does not use 'defeat devices' ..." Fourth Amended Complaint, ¶ 361. However, this statement was made on 9/22/15. See footnote 24.
					[24] The article with the title "Fiat Chrysler U.S. says its cars do not use any defeat devices" was published by <i>Reuters</i> at 9:58 AM ET on 9/22/15.
					[25] I was unable to verify the timing of the article cited by Plaintiffs on 12/2/15. According to Dr. Nye's regression model, Fiat Chrysler's residual stock price return is not statistically significant on 12/2/15 or 12/3/15.
					[26] The transcript of Fiat Chrysler's Earnings Call for Q4 2015 states that the call began at 3:30 PM GMT on 1/27/16.
					[27] The press release with the title "FCA on Real Driving Emissions" was published by <i>PR Newswire</i> at 1:50 AM ET on 2/2/16.
					[28] Fiat Chrysler's Form 20-F was accepted by the SEC at 4:16 PM ET on 2/29/16.
					[29] The article with the title "BRIEF-FCA has no comment on Bild report, says complies with emission rules" was published by <i>Reuters</i> at 4:08 AM ET on 5/23/16.
					[30] The press release with the title "FCA US Response to EPA" was published by <i>PR Newswire</i> at 11:13 AM ET on 1/12/17.

## Exhibit 2

### Additional Complaint Dates Not Listed in Dr. Nye's Exhibit 15 Statistical Significance of Residual Stock Price Returns<sup>[1]</sup>

Date	Event According to the Complaint	Potential Impact Date	Dr. Nye's Regression Results <sup>[2]</sup>		Complaint Paragraph
			Residual Return	Confidence Level <sup>[3]</sup>	
10/27/15	Fiat Chrysler announced the resignation of Defendant Kunselman.	10/27/15 <sup>[4]</sup>	1.3%	52.6%	¶ 334
12/9/15	NHTSA issued an amendment to its Consent Order alleging that Fiat Chrysler failed to report incidents of death and injury to NHTSA.	12/10/15 <sup>[5]</sup>	0.4%	16.6%	¶ 341
5/19/16	Fiat Chrysler cancelled a meeting with the German Transport Minister, which was scheduled to discuss an investigative commission on emissions.	5/19/16 <sup>[6]</sup>	-2.5%	83.9%	¶ 355
9/1/16	Reuters reported that the German government had formally accused Fiat Chrysler of using a defeat device to switch off emissions.	9/1/16 <sup>[7]</sup>	-1.6%	61.7%	¶ 360
10/17/16	Fiat Chrysler's Chief Technology Officer, Harald Wester, angered members of the European Parliament at a hearing in Brussels when he questioned methods used in reports that Fiat Chrysler's diesel cars were emitting excess emissions.	10/17/16 <sup>[8]</sup>	-0.3%	11.5%	¶ 363
3/31/17	Germany's transportation ministry announced that it had found a new defeat device in a Fiat Chrysler car.	3/31/17 <sup>[9]</sup>	-0.2%	10.9%	¶ 372
5/17/17	The European Commission decided to launch a formal investigation against the Italian government for allegedly allowing Fiat Chrysler to sell cars designed to evade emissions tests.	5/17/17 <sup>[10]</sup>	-1.8%	69.6%	¶ 373

Source: Fourth Amended Complaint; Nye Report Backup.

Note:

- [1] The Fourth Amended Complaint's sections titled "The Truth About Chrysler's NHTSA Violations Begins to Emerge as Defendants Continue To Make Materially False and Misleading Statements" and "The Truth About Chrysler's Emissions Violations Begins to Emerge" contain seven dates that are not alleged misstatements and Dr. Nye does not examine in his Exhibit 15.
- [2] Dr. Nye's regression results are from his model for Fiat Chrysler's stock traded in the United States.
- [3] \*\*\* denotes that a residual return is statistically significant at the 95% confidence level according to Dr. Nye's regression model. \*\* denotes that a residual return is statistically significant at the 90% confidence level according to Dr. Nye's regression model.
- [4] The press release with the title "FCA US Announces Kunselman Resignation" was published by *PR Newswire* at 9:06 AM ET on 10/27/15.
- [5] The article with the title "Fiat Chrysler to pay \$70 million U.S. auto safety fine -sources" was published by *Reuters* at 4:41 PM ET on 12/9/15.
- [6] The article with the title "Germany Says Fiat Chrysler Declines Request to Meet Over Diesel Emissions" was published by *Dow Jones* at 1:32 PM ET on 5/19/16.
- [7] The article with the title "Germany accuses Fiat of using illegal device in diesel engines - magazine" was published by *Reuters* at 3:45 AM ET on 9/1/16.
- [8] I am unable to verify the timing of the hearing on 10/17/16. According to Dr. Nye's regression model, Fiat Chrysler's residual stock price return is not statistically significant on 10/14/16, 10/17/16, and 10/18/16.
- [9] The article with the title "German transport ministry says finds defeat device in Fiat car" was published by *Reuters* at 12:29 PM ET on 3/31/17.
- [10] The article with the title "EU launches 'Dieselgate' case against Italy over Fiat emissions" was published by *Agence France Presse* at 7:11 AM ET on 5/17/17.

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### ACADEMIC POSITIONS

2000–present	HARVARD BUSINESS SCHOOL Eugene Holman Professor of Business Administration. Research interests include venture capital, private equity, entrepreneurial finance, institutional investors, corporate governance, optimal security design, dynamic capital structure, long-run performance of firms, and sources of financing for start-up businesses.	BOSTON, MA
1998–2000	HARVARD BUSINESS SCHOOL Associate Professor of Business Administration.	BOSTON, MA
1995–1998	HARVARD BUSINESS SCHOOL Assistant Professor of Business Administration.	BOSTON, MA
1993–1995	UNIVERSITY OF CHICAGO Assistant Professor of Finance and Policy at the Graduate School of Business. Created new course on the financing of start-up companies.	CHICAGO, IL
1995–present	NATIONAL BUREAU OF ECONOMIC RESEARCH Research Associate. Appointed as an NBER affiliate in corporate finance.	CAMBRIDGE, MA

### EDUCATION

1989–1993	HARVARD UNIVERSITY Received Ph.D. in Business Economics, June 1993.	CAMBRIDGE, MA
1987–1989	OXFORD UNIVERSITY Graduated <i>summa cum laude</i> with a M.Sc. in economics, July 1989.	OXFORD, UK
1982–1987	HARVARD COLLEGE Graduated <i>summa cum laude</i> with an A.B. in biology.	CAMBRIDGE, MA

## **PUBLICATIONS**

### **Books**

- The Venture Capital Cycle, (MIT Press, Cambridge) October 1999. (Joint with Josh Lerner.) First Edition.
- The Money of Invention, (Harvard Business School Press, Boston) November 2001. (Joint with Josh Lerner.)
- Entrepreneurial Finance: A Casebook, (John Wiley, New York) December 2001. (Joint with William Sahlman.)
- The Venture Capital Cycle, (MIT Press, Cambridge) October 1999. (Joint with Josh Lerner.) Second Edition. 2004.

### **Articles in Refereed Journals**

- “Optimal Investment, Monitoring, and the Staging of Venture Capital,” *Journal of Finance* 50, 1461-1489. December 1995. Reprinted in Michael Wright and Ken Robbie, editors, *Venture Capital* (International Library of Management) (Aldershot: Dartmouth Publishing, 1997.)
- “Grandstanding in the Venture Capital Industry,” *Journal of Financial Economics* 42, 133–156. July 1996.
- “The Rise and Fall of Venture Capital,” *Business and Economic History* 23, 1–24. Winter 1994. Awarded Newcomen Prize essay for best paper in business history.
- “The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements,” *Journal of Law and Economics* 39, 463–498. October 1996. (with Josh Lerner.)
- “Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure Capital-backed Companies.” *Journal of Finance* 52, 1791–1821. December 1997. (with Alon Brav.) Awarded the Smith-Breeden Distinguished Paper Award.
- “Venture Capital Growing Pains: Should the Market Diet?” *Journal of Banking and Finance* 22, 1089–1104. August 1998.
- “An Analysis of Compensation in the US Venture Capital Partnership,” *Journal of Financial Economics* 51, 3–44. January 1999. (with Josh Lerner.)
- “Venture Capital Distributions: Short-Run and Long-Run Reactions,” *Journal of Finance* 53, 2161–2184. December 1998. (with Josh Lerner.)
- “Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital,” *Journal of Law and Economics* 42, 1-28. April 1999. (with Josh Lerner.)
- “What Drives Venture Capital Fundraising?” *Brookings Proceedings on Microeconomic Activity*, 149-192. August 1998. (with Josh Lerner.)
- “Money Chasing Deals? The Impact of Fund Inflows on Private Equity Valuations,” *Journal of Financial Economics* 55, 281-325. February 2000. (with Josh Lerner.)
- “Is the Abnormal Return Following Equity Issuances Anomalous?” *Journal of Financial Economics* 56, 209–250. May 2000. (with Alon Brav and Chris Geczy.)
- “Institutional Investors and Equity Prices,” *Quarterly Journal of Economics* 114, 229–260. 2001. (with Andrew Metrick.)
- “The Venture Capital Revolution,” *Journal of Economic Perspectives* 15, 145–168. Spring 2001. (with Josh Lerner.)
- “Who Underreacts to Cash Flow News?” *Journal of Financial Economics* 66, 409–462. 2002. (with Randy Cohen and Tuomo Vuolteenaho.)
- “The Role of Lock-ups in Initial Public Offerings Provisions,” *Review of Financial Studies* 16, 1–29. Spring 2003. (with Alon Brav.)
- “Corporate Governance and Equity Prices,” *Quarterly Journal of Economics* 118, 107-156. February 2003. (with Joy Ishii and Andrew Metrick.)
- “The Really Long-Run Performance of Initial Public Offerings: Evidence from the Pre-Nasdaq Period, 1933–1972,” *Journal of Finance* 56, 1355–1392. August 2003. (with Josh Lerner.)

- “The Determinants of Board Structure and Function in Entrepreneurial Firms,” *Journal of Law and Economics* 46, 569–598. October 2003. (with Malcolm Baker.)
- “Entrepreneurial Spawning: Corporations and the Genesis of New Ventures, 1986–1999,” *Journal of Finance* 60, 577–614. April 2005. (with Josh Lerner and David Scharfstein.)
- “Large Blocks of Stock: Prevalence, Size, and Measurement,” *Journal of Corporate Finance* 12, 594–618. June 2006. (with Rudiger Fahlenbrach, Jennifer Dlugosz, and Andrew Metrick.)
- “Venture Capital Investment Cycles: The Impact of Public Markets,” *Journal of Financial Economics*, 1–23. 2008. (with Anna Kovner, Josh Lerner, and David Scharfstein.)
- “Specialization and Success: Evidence from Venture Capital,” *Journal of Economic and Management Strategy* 18, 817–845. 2009. (with Anna Kovner, Josh Lerner, and David Scharfstein.)
- “Extreme Governance: An Analysis of Dual-Class Firms in the United States,” *Review of Financial Studies* 23, 1051–1088. 2010. (with Joy Ishii and Andrew Metrick.)
- “Performance Persistence in Entrepreneurship and Venture Capital,” *Journal of Financial Economics* 96, 18–32. 2010. (with Anna Kovner, Josh Lerner, and David Scharfstein.)
- “Buy Local? The Geography of Successful Venture Capital Expansion,” *Journal of Urban Economics* 67, 90–102. 2010. (with Henry Chen, Anna Kovner, and Josh Lerner.)
- “Gender Effects in Venture Capital.” November 2015. Revise and resubmit at *Management Science*. (with Vladimir Mukharlyamov, Emily Weisburst, and Yuhai Xuan.)
- “The Cost of Friendship,” *Journal of Financial Economics* 119, 626–644. March 2016. (with Vladimir Mukharlyamov and Yuhai Xuan.)
- “What Do Private Equity Firms Say They Do?” *Journal of Financial Economics* 121, 449–476. September 2016. (with Steven N. Kaplan and Vladimir Mukharlyamov.)

#### **Other Articles**

- “Venture Capital and the Creation of Public Companies: Do Venture Capitalists Really Bring More than Money?” *Journal of Private Equity* 1, 15–32. Fall 1997. (with Josh Lerner.)
- “Risk and Reward in Private Equity Investments: The Challenge of Performance Assessment,” *Journal of Private Equity* 1, 5–12. Winter 1997. (with Josh Lerner.)
- “Resource Allocation, Incentives, and Control: The Importance of Venture Capital in Financing Entrepreneurial Firms,” *Entrepreneurship, SMEs, and the Macroeconomy* (Cambridge University Press, Cambridge), 206–238. February 1997.
- “Venture Capital,” *The Handbook of Technology Management* (Richard Dorf, Editor-in-Chief). January 1997. (with Josh Lerner.)
- “The Determinants of Corporate Venture Capital Success: Organizational Structure, Incentives, and Complementarities,” NBER Conference Volume on Concentrated Corporate Ownership, 17–54. September 1998.
- “Capital Formation and Investment in Venture Markets: An Assessment of Market Imperfections,” *The Economic Evaluation of Technological Change* (Richard Spivack, Editor). June 1998.
- “Corporations and the Financing of Innovation: The Corporate Venturing Experience,” *The Atlanta Federal Reserve Bank Conference Volume*, 1–17. 2002.
- “Venture Capital and Private Equity,” *The Handbook of Corporate Finance* (Espen Eckbo, Editor) (North-Holland Press, New York). 2002.
- “Short-Term America Revisited? Boom and Bust in the Venture Capital Industry and the Impact on Innovation,” *Innovation Policy and the Economy* 3, 1–28. March 2002. (with Josh Lerner.)
- “Venture Capital,” Chap. D5 of *The Handbook of Modern Finance* (Dennis Lougue, Editor). 2007. (with Josh Lerner.)
- “Equity Financing,” *Handbook of Entrepreneurship Research: An Interdisciplinary Survey and introduction* (Zoltan Acs and David B. Audretsch, Editor). 2010. (with Josh Lerner.)
- “The Role of Venture Capitalists in the Acquisition of Private Companies.” In *Research Handbook on International Banking and Governance*, edited by James Barth, Chen Lin, and Clas Wihlborg. Cheltenham, UK: Edward Elgar Publishing, 2012. (with Yuhai Xuan.)

**Working Papers**

- “More than Money: Venture Capitalists on Boards.” March 2015. (with Natee Amornsiripanitch and Yuhai Xuan.)
- “To Err is Human, To Forgive is a Mistake: Evidence from Venture Capital Hiring,” December 2013 (with Vladimir Mukharlyamov and Yuhai Xuan.)
- “Bridge Building in Venture Capital: Evidence from Acquisitions of Venture Capital-backed Companies,” December 2011. Revise and resubmit at *Review of Financial Studies* (with Yuhai Xuan.)
- “Reputation and Contractual Flexibility: Evidence from Venture Capital Distribution Pricing Policies,” August 2011. (with Timothy Dore and Andrew Metrick.)
- “Why Experienced Venture Capitalists Leave Money on the Table: Evidence from Initial Public Offerings,” July 2009. (with Alon Brav and Tim Dore.)
- “Institutions, Capital Constraints and Entrepreneurial Firm Dynamics: Evidence from Europe,” November 2006. (with Mihir Desai and Josh Lerner.)
- “Skill vs. Luck in Entrepreneurship and Venture Capital: Evidence from Serial Entrepreneurs,” December 2006. (with Anna Kovner, Josh Lerner, and David Scharfstein.)
- “The Role of Venture Capitalists in the Acquisition of Private Companies,” October 2005. (with Yuhai Xian.)
- “Incentives vs. Control: An Analysis of U.S. Dual-class Companies,” April 2004. (with Andrew Metrick and Joy Ishii.)
- “Ownership and Control in Entrepreneurial Firms: An Examination of Convertible Securities in Venture Capital Investment,” January 2000.
- “An Analysis of Executive Compensation, Ownership, and Control in Entrepreneurial Firms,” May 2000. (with Malcolm Baker.)

**Opinion — Editorials**

- “This Tax Cut Will Pay Dividends,” *Wall Street Journal*, August 13, 2002. (with Andrew Metrick and Jeremy Siegel.)

**Projects in Process**

- “The Evolution of Ownership and Control in Entrepreneurial Firms.” (with Malcolm Baker.)
- “Dual Class IPOs.” (with Malcolm Baker.)
- “Pre-public Financing in Entrepreneurial Ventures.”
- “Institutional Ownership and Corporate Governance.” (with Andrew Metrick and Joy Ishii.)
- “The Dynamics of Global Entrepreneurship.” (with Mihir Desai and Josh Lerner.)
- “The Determinants of Venture Capital Acquisitions.” (with Yuhai Xuan.)
- “The Determinants of Entrepreneurial Success.” (with Anna Kovner, Josh Lerner, and David Scharfstein.)
- “Risk and Return in Private Equity.” (with Leslie Jeng, Josh Lerner, and Andrew Metrick.)
- “Corporate Governance through Time.” (with Martijn Cremers, Allen Ferrell, and Andrew Metrick.)

**COURSE MATERIALS****Cases**

- “Abraaj Capital and Acibadem Healthcare Investment (A).” Harvard Business School Case 214-021.
- “Abraaj Capital and Acibadem Healthcare Investment (B).” Harvard Business School Case 214-022.
- “Advantage Partners: Dia Kanri (A).” Harvard Business School Case 214-016.
- “Advantage Partners: Dia Kanri (B).” Harvard Business School Case 214-017.
- “The Advent Israel Venture Capital Program.” Harvard Business School Case 298-072.



- “ALWAYSi.” Harvard Business School Case 201–075.
- “APV Technology Partners II, L.P.” Harvard Business School Case 298–048.
- “Ardian: The Sale of Diana.” Harvard Business School Case 215-033.
- “Bain Capital: Outback Steakhouse.” Harvard Business School Case 212-087.
- “Bang Networks, Inc.” Harvard Business School Case 201–074.
- “BioTransplant, Inc.: Initial Public Offering, January 1996.” Harvard Business School Case 297–095.
- “Cachet Technologies.” Harvard Business School Case 200–031.
- “Cambridge Technology Partners: 1991 Start Up.” Harvard Business School Case 298–044.
- “Cambridge Technology Partners: Corporate Venturing (August 1996).” Harvard Business School Case 297–033.
- “Car Wash Partners, Inc.” Harvard Business School Case 299–034.
- “Charles River Velocity.” Harvard Business School Case 201–092.
- “Charter Communication Bankruptcy.” Harvard Business School Case 211-035.
- “Dell Ventures.” Harvard Business School Case 200–062.
- “Digital Everywhere, Inc.” Harvard Business School Case 298–099.
- “edocs, Inc. (A).” Harvard Business School Case 200–015.
- “edocs, Inc. (B-1): Kevin Laracey.” Harvard Business School Case 200–020.
- “edocs, Inc. (B-2): Jonathon Guerster.” Harvard Business School Case 200–021.
- “Efficient Market Services: August 1993 (A).” Harvard Business School Case 298–009.
- “Efficient Market Services: August 1993 (B1), EMS Management.” Harvard Business School Case 298–010.
- “Efficient Market Services: August 1993 (B2), Comdisco Ventures.” Harvard Business School Case 298–011.
- “Elliot Lebowitz.” Harvard Business School Case 297–094.
- “Endeca: New Growth Opportunities.” Harvard Business School Case 206–041.
- “First Mark Capital.” Harvard Business School Case 212-041.
- “Fitzpatrick Hotel Group (A).” Harvard Business School Case 298–002.
- “Fitzpatrick Hotel Group (B1): Niall Carroll.” Harvard Business School Case 298–003.
- “Fitzpatrick Hotel Group (B2): Paddy Fitzpatrick.” Harvard Business School Case 298–004.
- “Founders Fund.” Harvard Business School Case 211-040.
- “Genset Initial Public Offering (A).” Harvard Business School Case 297–096.
- “Genset Initial Public Offering (B).” Harvard Business School Case 297–097.
- “Genset: 1989.” Harvard Business School Case 298–070.
- “Global Digital Utilities Corp.” Harvard Business School Case 297–065.
- “Globant: Going Public.” Harvard Business School Case 215-021.
- “Harrah’s Entertainment LBO.” Harvard Business School Case 13-054.
- “HgCapital and the Visma Transaction: (A).” Harvard Business School Case 214-018.
- “HgCapital and the Visma Transaction: (B).” Harvard Business School Case 214-019.
- “HgCapital and the Visma Transaction: (C).” Harvard Business School Case 214-020.
- “Honest Tea.” Harvard Business School Case 201–076.
- “Hudson Manufacturing.” Harvard Business School Case 203–064.
- “Knightsbridge Advisers, Inc.” Harvard Business School Case 296–054.
- “Knoll Furniture: Going Public.” Harvard Business School Case 202–114.
- “MSE, Inc. Privatization: August 1997.” Harvard Business School Case 298–135.
- “MSE, Inc. Privatization: August 1997 (Abridged).” Harvard Business School Case 298–136.
- “New Oriental.” Harvard Business School Case.
- “New York Bagel: Hungary, April 1994.” Harvard Business School Case 297–078.
- “NSK Software Technologies Ltd.” Harvard Business School Case 298–071.
- “Ocular.” Harvard Business School Case 202–118.
- “Pet Doctors: 1999.” Harvard Business School Case 200–016.

- “The Prague Post.” Harvard Business School Case 299–033.
- “Private Equity Finance Vignettes: 2016.” Harvard Business School Case 216-005.
- “Private Equity Vignettes: 2014.” Harvard Business School Case 213-026.
- “Sarvega.” Harvard Business School Case 204–137.
- “Shenzhen Capital Group: A Pioneer in China’s VC Industry” Harvard Business School Case 211-029.
- “Sky Air, Inc.” Harvard Business School Case 297–110.
- “Torrent Systems.” Harvard Business School Case 298–084.
- “Tutor Time (A).” Harvard Business School Case 297–064.
- “Tutor Time (B).” Harvard Business School Case 297–074.
- “United Capital Partners (A).” Harvard Business School Case 213-044.
- “United Capital Partners (B).” Harvard Business School Case 213-045.
- “Venture Capital in Ireland: Getting Their ACT Together.” Harvard Business School Case 298–001.
- “Vueling Airlines.” Harvard Business School Case.
- “Xedia and Silicon Valley Bank (A).” Harvard Business School Case 298–119.
- “Xedia and Silicon Valley Bank (B1): The Bank’s Perspective.” Harvard Business School Case 298–120.
- “Xedia and Silicon Valley Bank (B2): The Company’s Perspective.” Harvard Business School Case 298–121.
- “Xedia and Silicon Valley Bank (C): The Final Agreement.” Harvard Business School Case 298–122.
- “ZEFER: November 1998.” Harvard Business School Case 299–032.

#### **Teaching Notes**

- “Advent Israel Venture Capital Program TN.” Harvard Business School Teaching Note 299–054.
- “APV Technology Partners II, L.P. TN.” Harvard Business School Teaching Note 299–053.
- “Beta Golf.” Harvard Business School Teaching Note 202–062.
- “BioTransplant Inc.: Initial Public Offering, January 1996 TN.” Harvard Business School Teaching Note 299–055.
- “Cachet Technologies.” Harvard Business School Teaching Note 202–068.
- “Cambridge Technology Partners —1991 Start Up TN.” Harvard Business School Teaching Note 299–057.
- “Cambridge Technology Partners: Corporate Venturing (August 1996) TN.” Harvard Business School Teaching Note 299–056.
- “Carlton Polish Co.” Harvard Business School Teaching Note 202–076.
- “Car Wash Partners, Inc. TN.” Harvard Business School Teaching Note 299–058.
- “Contracting and Control in Venture Capital.” Harvard Business School Note 298–067.
- “Dell Ventures.” Harvard Business School Teaching Note 202–072.
- “Digital Everywhere, Inc. TN.” Harvard Business School Teaching Note 299–059.
- “edocs, Inc. Series.” Harvard Business School Teaching Note 202–064.
- “Elliot Lebowitz TN.” Harvard Business School Teaching Note 299–060.
- “Emergence of Silicon Wadi.” Harvard Business School Note 204–156.
- “Fenchel Lampshade Company.” Harvard Business School Teaching Note 202–063.
- “Efficient Market Services: August 1993 Series TN.” Harvard Business School Teaching Note 299–061.
- “Fitzpatrick Hotel Group Series TN.” Harvard Business School Teaching Note 299–062.
- “Genset: 1989 TN.” Harvard Business School Teaching Note 299–063.
- “Genset Initial Public Offering (A) & (B) TN.” Harvard Business School Teaching Note 299–064.
- “Global Digital Utilities Corporation TN.” Harvard Business School Teaching Note 299–065.
- “HIMSCORP, Inc.” Harvard Business School Teaching Note 202–073.
- “Honest Tea.” Harvard Business School Teaching Note 202–069.



- “Introduction to Entrepreneurial Finance.” Harvard Business School Note 298–061.
- “Introduction to Private Equity Finance.” Harvard Business School Note 213-026.
- “Knightsbridge Advisers, Inc. TN.” Harvard Business School Teaching Note 299–066.
- “Knot, The.” Harvard Business School Teaching Note 202–070.
- “MSE, Inc. Privatization: August 1997 & MSE, Inc. Privatization: August 1997 (Abridged) TN.” Harvard Business School Teaching Note 299–067.
- “Nantucket Nectars.” Harvard Business School Teaching Note 202–074.
- “New York Bagel: Hungary, April 1994 TN.” Harvard Business School Teaching Note 299–068.
- “A Note on Angel Financing.” Harvard Business School Note 298–083.
- “A Note on LBO Capital Structure.” Harvard Business School Note 213-091.
- “A Note on Franchising.” Harvard Business School Note 297–108.
- “A Note on Government Sources of Financing for Small Businesses.” Harvard Business School Note 298–015.
- “Note on Strategic Alliances, A.” Harvard Business School Note 298–047.
- “A Note on the Internet.” Harvard Business School Note 297–109.
- “A Note on Private Equity Exits.” Harvard Business School Note 213-112.
- “A Note on the Venture Capital Industry.” Harvard Business School Note 295–065.
- “A Note on Valuation in Entrepreneurial Ventures.” Harvard Business School Note 298–082.
- “A Note on Valuation in Private Equity.” Harvard Business School Note 213-034.
- “NSK Software Technologies Ltd. TN.” Harvard Business School Teaching Note 299–069.
- “Parenting Magazine TN.” Harvard Business School Teaching Note 202–065.
- “Penelope’s Personal Pocket Phones TN.” Harvard Business School Teaching Note 299–070.
- “Prague Post, The TN.” Harvard Business School Teaching Note 299–071.
- “Private Equity Valuation in Emerging Markets.” Harvard Business School Note 213-043.
- “Record Masters.” Harvard Business School Teaching Note 202–075.
- “Penelope’s Personal Pocket Phones.” Harvard Business School Case 299–004.
- “Sky Air, Inc. TN.” Harvard Business School Teaching Note 299–072.
- “Torrent Systems TN.” Harvard Business School Teaching Note 299–073.
- “Tutor Time (A) TN.” Harvard Business School Teaching Note 299–074.
- “Tutor Time (B) TN.” Harvard Business School Teaching Note 299–078.
- “Venture Capital in Ireland: Getting Their ACT Together TN.” Harvard Business School Teaching Note 299–075.
- “Xedia and Silicon Valley Bank Series TN.” Harvard Business School Teaching Note 299–076.
- “ZEFER: November 1998 TN.” Harvard Business School Teaching Note 299–077.

#### **SEMINARS AND CONFERENCE PRESENTATIONS — Academic**

- American Economic Association: Annual Meeting, January 1995, “Optimal Investment, Monitoring, and the Staging of Venture Capital.”
- American Finance Association: Annual Meeting, January 1995, “An Analysis of Compensation in the U.S. Venture Capital Partnership.”
- American Finance Association: Annual Meeting, January 1996, “Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies.”
- American Finance Association: Annual Meeting, January 1999, “What Drives Venture Capital Fundraising.”
- American Finance Association: Annual Meeting, January 2000, “An Analysis of Executive Compensation, Ownership, and Control in Entrepreneurial Firms.”
- American Finance Association: Annual Meeting, January 2004, “Incentives vs. Control: An Analysis of U.S. Dual-class companies.”
- American Finance Association: Annual Meeting, January 2015, “Cost of Friendship.”

American Finance Association: Annual Meeting, January 2015, “What Do Private Equity Firms (Say) They Do?”

American Law and Economics Association: Annual Meeting, May 1996, “The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements.”

Association of Financial Economists: Annual Meeting, January 2001, “The Determinants of Board Structure and Function in Entrepreneurial Firms.”

Association of Financial Economists: Annual Meeting, January 2006, “Skill vs. Luck: An Analysis of Serial Entrepreneurs.”

Arizona State University School of Business: Finance Seminar, December 1995, “Venture Capital Distributions: Short-Run and Long-Run Reactions.”

Boston University: Finance Seminar, December 1996, “Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies.”

Brandeis University: Entrepreneurship Conference, April 2014, “The Next Big Question in Entrepreneurship Research.”

Brookings Institute: Microeconomic Conference, June 1998, “What Drives Venture Fundraising?”

Business and Economic History: Annual Meeting, March 1994, “The Rise and Fall of Venture Capital.”

Center for Research on Security Prices: Biannual Meeting, March 1995, “Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies.”

Center for Research on Security Prices: Biannual Meeting, November 1994, “Venture Capital Distributions: Short-Run and Long-Run Reactions.”

Center for Economic and Policy Research: European Finance Conference on Financing Innovation, November 1998, “What Drives Venture Capital Fundraising?”

Columbia Law School: Law and Economics Seminar, November 1995, “An Analysis of Compensation in the U.S. Venture Capital Partnership.”

Columbia Law School: Law and Economics Seminar, November 1995, “The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements.”

Columbia Law School: Financing Innovation Conference, December 1997, “An Analysis of Covenants in Venture Capital Investments.”

Columbia University School of Business: Finance Seminar, January 1993, “Grandstanding in the Venture Capital Industry.”

Copenhagen Business School: Finance Seminar, May 1999, “An Analysis of Executive Compensation, Ownership, and Control in Closely Held Firms.”

Cornell Business School: Finance Seminar, October 2001, “Corporate Governance and Equity Prices.”

Federal Reserve Bank of Chicago: January 1994, “Optimal Investment, Monitoring, and the Staging of Venture Capital.”

Duke University Fuqua Business School: Finance Seminar, January 1993, “Grandstanding in the Venture Capital Industry.”

Georgetown Law School: April 2003, “Corporate Governance and Equity Prices.”

Harvard Business School: Business History Seminar, December 2000, “The History of Silicon Valley.”

Harvard Business School: Entrepreneurship Conference, December 2000, “The Really Long-run Performance of Initial Public Offerings.”

Harvard Business School: Financial Decision and Control Workshop, July 1994, “Optimal Investment, Monitoring, and the Staging of Venture Capital.”

Harvard Business School: Financial Decision and Control Workshop, July 1996, “Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies.”

Harvard Business School: Financial Decision and Control Workshop, July 1997, “Reputation and Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital.”

Harvard Business School: Financial Decision and Control Workshop, July 1998, “How are Large

- Institutions Different From Other Investors? Why Do These Differences Matter for Equity Prices and Returns?”
- Harvard Business School: Finance Seminar, February 1994, “An Analysis of Compensation in the U.S. Venture Capital Partnership.”
- Harvard Business School: Finance Seminar, January 1993, “Grandstanding in the Venture Capital Industry.”
- Harvard Business School: Finance Seminar, October 1996, “Venture Capital Distributions: Short-Run and Long-Run Reactions.”
- Harvard Business School: Finance Seminar, May 1999, “An Analysis of CEO Compensation, Ownership, and Control in Closely Held Firms.”
- Harvard Business School: Finance Seminar, October 2011, “The Cost of Friendship.”
- Harvard Business School: Organizations and Markets Seminar, May 1999, “An Analysis of CEO Compensation, Ownership, and Control in Closely Held Firms.”
- Harvard Business School: Finance Seminar, November 2000, “The Venture Capital Revolution.”
- Harvard Business School: Finance Seminar, March 2006, “Skill vs. Luck: An Analysis of Serial Entrepreneurs.”
- Harvard Business School: Finance Seminar, December 2008, “Bridge Building in Venture Capital: Evidence from Acquisitions.”
- Harvard Business School: Finance Seminar, December 2014, “More than Money: Venture Capitalists on Boards.”
- Harvard Business School: Finance Seminar, February 2015, “What do Private Equity Firms (Say) They Do?”
- Harvard Business School: Organizational Behavior Seminar, February 2012, “The Role of Social Ties in Venture Capital.”
- Harvard University Department of Economics: Workshop, December 1992, “Optimal Investment, Monitoring, and the Staging of Venture Capital.”
- Harvard University Department of Economics: Organizations Workshop, December 1996, “Reputation and Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital.”
- Harvard University Department of Economics: Organizations Workshop, December 2002, “Entrepreneurial Spawning.”
- Harvard University Department of Economics: Organizations Workshop, December 1998, “Are the Hundred-Million-Dollar Managers Just Like Everyone Else? An Analysis of the Stock Ownership of Large Institutions.”
- Harvard University Department of Economics: Organizations Workshop, September 2003, “Entrepreneurial Spawning: Corporations and the Genesis of New Ventures, 1986–1999.”
- Hebrew University School of Business: Finance Seminar, March 1994, “An Analysis of Compensation in the U.S. Venture Capital Partnership.”
- Hebrew University School of Business: Finance Seminar, March 1995, “Venture Capital Distributions: Short-Run and Long-Run Reactions.”
- Hebrew University School of Business: Distinguished Lecture: December 2014, “What Do Private Equity Firms (Say) They Do?”
- London School of Economics: Venture Capital Conference, October 1998, “How You Get There Matters: The Path Dependency of Executive Compensation in Closely Held Firms.”
- Massachusetts Institute of Technology: Organizations Workshop, March 1996, “The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements.”
- Massachusetts Institute of Technology and Harvard University: Public Finance Workshop, March 1998, “What Drives Venture Fundraising?”
- National Bureau of Economic Research: Corporate Finance Group, April 1994, “Optimal Investment, Monitoring, and the Staging of Venture Capital.”
- National Bureau of Economic Research: Summer Institute, July 1994, “An Analysis of Compensation in the U.S. Venture Partnership Agreement.”

- National Bureau of Economic Research: Summer Institute, July 1995, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."
- National Bureau of Economic Research: Summer Institute, July 1996, "Venture Capital Distributions: Short-Run and Long-Run Reactions."
- National Bureau of Economic Research: Finance Series, December 1997, "Are the Hundred-Million-Dollar Managers Just Like Everyone Else? An Analysis of the Stock Ownership of Large Institutions."
- National Bureau of Economic Research: Finance Series, November 1998, "How You Get There Matters: The Path Dependency of Executive Compensation in Closely-Held Firms."
- National Bureau of Economic Research: Summer Institute, July 2001, "Corporate Governance and Equity Prices."
- New York Federal Reserve Bank: May 2000, "The Determinants of Board Structure and Function in Entrepreneurial Firms."
- New York University, Stern School of Business: Finance Seminar, January 1993, "Grandstanding in the Venture Capital Industry."
- New York University, Stern School of Business: Finance Seminar, February 1999, "How You Get There Matters: The Path Dependency of Executive Compensation in Closely-Held Firms."
- New York University, Stern School of Business: Finance Seminar, October 2006, "Skill vs. Luck: An Analysis of Serial Entrepreneurs."
- Northwestern University, Kellogg Business School: Finance Seminar, January 1993, "Grandstanding in the Venture Capital Industry."
- Northwestern University, Kellogg Business School: Finance Seminar, October 1997, "Money Chasing Deals? The Impact of Fund Inflows on Private Equity Valuations."
- Norwegian School of Management: Finance Seminar, May 1999, "An Analysis of Executive Compensation, Ownership, and Control in Closely Held Firms."
- Ohio State University: Finance Seminar, October 1998, "How You Get There Matters: The Path Dependency of Corporate Governance in Closely Held Firms."
- Oxford University: Graduate Student Seminar, May 1989.
- Oxford University: Finance Seminar, May 1999, "An Analysis of Executive Compensation, Ownership, and Control in Closely Held Firms."
- Queens University (Kingston, Ontario) School of Business: Finance Seminar, November 1996, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."
- Rutgers University: Finance Seminar, October 1997, "Money Chasing Deals? The Impact of Fund Inflows on Private Equity Valuations."
- Stanford University Graduate School of Business: Strategy Workshop, January 1993, "Grandstanding in the Venture Capital Industry."
- Stanford University Graduate School of Business: Center for Economic and Political Research, March 1997, "The Valuation of Private Equity Investments."
- Stanford University: Finance Seminar, October 2012, "The Cost of Friendship."
- Stockholm Business School: September 2003, "Entrepreneurial Spawning: Corporations and the Genesis of New Ventures, 1986–1999."
- Tel Aviv University School of Business: Finance Seminar, March 1994, "An Analysis of Compensation in the U.S. Venture Capital Partnership."
- Tel Aviv University School of Business: Finance Seminar, March 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."
- Tel Aviv University School of Business: Finance Seminar, December 2014, "What Do Private Equity Firms (Say) They Do?"
- University of Arizona School of Business: Finance Seminar, December 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."



**SPEECHES AND CONFERENCE PRESENTATIONS — Practitioner**

Advanced Technology Program, National Institute for Standards and Technology and NBER Conference on Financing Innovation, June 1998.

Amsterdam Institute of Finance, October 1994, “Venture Capital and the Finance of Emerging Companies.”

American Friends of the Technion, October 1998, “The Development of High Technology and Venture Capital in Israel.”

AT&T Small Business Conference, April 1994, “Venture Capital: The Road Ahead.”

Center for Economic Policy Research, Venture Capital Conference, March 1997, “The Pricing of Private Equity Investments: A Window on the Returns of Tomorrow.”

Deloitte and Touche, May 2003, “Entrepreneurial Leadership.”

Ernst and Young Silicon Valley Venture Capital Conference, 2002, “The Future of Venture Capital.”

Ernst and Young Buyout Roundtable, 2002, “Corporate Governance and Private Equity.”

Greenwich Roundtable, 2015, “Skill in Private Equity.”

Harvard Business School Venture Capital Conference, December 1995, “Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies” and “Venture Capital Distributions: Short-run and Long-run Reactions.”

Harvard Business School Alumni Series, May 2000 and May 2003, “The Future of Private Equity.”

Harvard Business School European Conference, June 2003, “European Private Equity.”

Harvard Business School Global Alumni Conference, June 1998, “Consolidation Buy-outs.”

Harvard Business School Global Alumni Conference, May 2001, “Venture Capital 2001: Boom or Bust?”

Harvard Business School Centennial Celebration, February 2010, “Private Equity at the Crossroads.”

Harvard Business School Global Alumni Venture Capital Conference, May 2012, “New Venture Capital Models”

Harvard Business School Global Alumni Venture Capital Conference, October 2014, “Lessons from the Trenches.”

Hambrecht and Quist, Post-Venture Forum, March 1999, “Venture and Post-Venture Opportunities: Insights from Research.”

Institutional Limited Partner’s Association, September 1997, “Risk and Return in Private Equity.”

Institutional Limited Partner’s Association, April 2002, “New Tools for Assessing Private Equity Valuation and Asset Allocation.”

International Business Forum, June 1999, “Venture Capitalists and the Public Markets.”

Investors’ Press Alpha Roundtable, October 1996, “The Future of Private Equity.”

Israel Business Forum, March 1994.

Israeli Venture Capital and High Technology Conference, 2002, “The Future of Venture Capital and Its Implication for Israel.”

Japanese Private Equity Forum, July 1997, “Corporations and Venture Capital: Old and New Challenges.”

Latin American Chamber of Commerce, February 1995, “Capital for Entrepreneurial Companies: A Look Ahead.”

Massachusetts Public Pension Fund Investment Forum, October 1998, “Venture Capital: Investing in Start-up and Newly Public Firms.”

National Venture Capital Association, March 2003, “The Future of Venture Capital.”

Nova Pharmaceuticals, September 2009, “Venture Capital after the Downturn.”

OPAL Institutional Investors Conference, December 2000, “The Future of Private Equity.”

Rocky Mountain Venture Capital Association, March 2003, “Venture Capital: Challenges and Opportunities.”

Russell Capital Private Equity Conference, March 1997, “The Pricing of Private Equity Investments: A Window on the Returns of Tomorrow.”

University of California at Berkeley, Haas School of Business: Finance Seminar, April 1993, "Grandstanding in the Venture Capital Industry."

University of California at Los Angeles: Finance Seminar, May 1997, "The Valuation of Private Equity Investments."

University of California at Los Angeles: Behavioral Finance Conference, April 1998, "Are the Hundred-Million-Dollar Managers Just Like Everyone Else? An Analysis of the Stock Ownership of Large Institutions."

University of Chicago Graduate School of Business: Finance Seminar, January 1993, "Grandstanding in the Venture Capital Industry."

University of Chicago Graduate School of Business: Information and Uncertainty Seminar, April 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

University of Chicago Graduate School of Business: Finance Seminar, May 2006, "Skill vs. Luck: An Analysis of Serial Entrepreneurs."

University of Chicago Economics Department: Economic and Legal Organization Workshop, February 1994, "The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements."

University of Chicago Economics Department: Economic and Legal Organization Workshop, October 1997, "Reputation and Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital."

University of Georgia School of Business: Finance Seminar, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."

University of Illinois School of Business: Finance Seminar, October 1994, "Optimal Investment, Monitoring, and the Staging of Venture Capital."

University of Michigan School of Business: Finance Seminar, November 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

University of North Carolina School of Business: Finance Seminar, November 1995, "Venture Capital Distributions: Short-Run and Long-Run Reactions."

University of Pennsylvania Wharton School: Finance Workshop, March 1998, "Money Chasing Deals? The Impact of Venture Inflows of Private Equity Prices."

University of Rochester Simon School of Business: Finance Seminar, December 1996, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."

University of Rochester Simon School of Business: Organizations Seminar, February 1993, "Grandstanding in the Venture Capital Industry."

Virginia Tech University School of Business: Finance Seminar, October 1995, "Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure-backed Companies."

World Bank: Finance Seminar, May 1999, "An Analysis of CEO Compensation, Ownership, and Control in Closely Held Firms."

Western Finance Association: Annual Meeting, June 1994, "Optimal Investment, Monitoring, and the Staging of Venture Capital."

Western Finance Association: Annual Meeting, June 1995, "The Long-run Underperformance of Seasoned Equity Offerings Revisited."

Western Finance Association: Annual Meeting, June 1996, "The Use of Covenants: An Empirical Analysis of Venture Partnership Agreements."

Western Finance Association: Annual Meeting, June 1997, "Reputation and Conflict of Interest in the Issuance of Public Securities: Evidence from Venture Capital."

Western Finance Association: Annual Meeting, June 1998, "How are Large Institutions Different from Other Investors? Why These Differences Matter for Equity Prices and Returns?"

Yale University, School of Management: Finance Seminar, January 1993, "Grandstanding in the Venture Capital Industry."

Russell Capital Private Equity Conference, November 1998, “Advent Israel Venture Capital Program.”  
 Salomon Smith Barney Private Equity Conference, March 2000, “The Future of Private Equity.”  
 Salomon Smith Barney Consulting Group, March 2001, “Risk and Return in Private Equity.”  
 Samsung Venture Capital Group, October 1997, “Corporations and Venture Capital: Old and New Challenges.”  
 Seeking Alpha, March 2015, “What’s Hot in Venture Capital Fundraising?”  
 Silicon Valley Bank, May 2003, “Venture Capital: Challenges and Opportunity.”  
 SuperReturn Conference US, May 2009, “Insights from Private Equity Academic Research at the Harvard Business School.”  
 SuperReturn Conference Europe, February 2011, “Insights from Private Equity Academic Research at the Harvard Business School.”  
 SuperReturn Conference US, May 2013, “The Future of Private Equity.”  
 University of Chicago Business Forum, May 1995, “The Next Ten Years in Venture Capital.” (Organized and moderated panel.)  
 Venture Economics Venture Forum, November 1994, “The Venture Cycle.” (Keynote Address.)  
 Venture Economics Venture Forum, November 1994, Panelist for IPO performance issues.  
 Venture Economics Venture Forum, November 1996, Plenary session speaker on venture capital returns.  
 VentureOne / Ernst and Young Venture Capital Conference, July 2002, “The Future of Venture Capital.”  
 VentureOne / Ernst and Young Venture Capital Conference, July 2003, “The Future of European Venture Capital.”  
 Young Presidents’ Organization Conference, November 1998, “Entrepreneurial Opportunities in Crisis Situations.”  
 Young Presidents’ Organization Conference, January 2003, “The Future of Venture Capital.”  
 Young Presidents’ Organization Conference, January 2010, “New Models in Venture Capital.”  
 Young Presidents’ Organization Conference, January 2013, “Private Equity Trends.”  
 In addition, made presentations of research findings for several institutional investors and investment managers who contributed data for the project on interactions between venture organizations and institutional investors.

## **TEACHING**

### **University of Chicago**

Developed and taught course “Entrepreneurial Finance and Management,” a second-year MBA elective, 1993–1995.

### **Harvard Business School**

Taught “First-Year Finance,” in Required Curriculum, 1995–1997.  
 Taught “Entrepreneurial Finance,” in Elective Curriculum, 1997–2003.  
 Taught “The Entrepreneurial Manager,” in Required Curriculum, 2003–2008.  
 Taught “Venture Capital and Private Equity,” in Elective Curriculum, 2009–2012.  
 Co-developed and taught, “Private Equity Finance,” in Elective Curriculum, 2012–2015.  
 Developed and taught, “Private Equity Field,” in Elective Curriculum, 2013.  
 Course Head for “The Entrepreneurial Manager” in Required Curriculum 2005–2008.  
 Co-developed and co-taught Ph.D. course “Empirical Topics in Corporate Finance,” 1999–2015. (with Josh Lerner.)  
 Co-developed and partially taught three-day executive courses on venture capital and private equity:  
 “Conflict and Evolution in Private Equity” (1996), “Corporate Venture Capital: The Third Wave” (1997), “The Internationalization of Private Equity” (1998), “Structuring Effective Private Equity Organizations” (1999, 2000), “Optimizing Corporate Investments” (2000), “Doing Private Equity Deals” (2001, 2003), “Private Equity in a Downturn” (2002), “Private Equity Deals” (2004),

“Private Equity and Corporate Governance” (2005), “Venture Capital and Private Equity” (2006), “Internationalization of Private Equity” (2007), “Private Equity and Venture Capital” (2008), and “Private Equity after the Downturn” (2009), “Venture Capital and Private Equity” (2010-2011). “Private Equity and Venture Capital: After the Financial Crisis” (2012), Private Equity and Venture Capital: The Future” (2013). “Private Equity and Venture Capital: At the Crossroads” (2014). “Private Equity and Venture Capital: Changing Market Power.” (2015) (all with Josh Lerner.)

Co-developed and taught “Economics of Markets,” in Elective Curriculum, 1997.

Partially taught in a variety of programs including:

General Management Program / START, August 1996.

HBS / CIEBA Pension Workshop, April 1996.

YPO Conference, February 1997, February 2003, February 2006, February 2008.

Strategic Finance for Small Business, February 1998, March 1999, March 2000.

Entrepreneur’s Toolkit, June 1997, June 1998, June 1999.

## **PROFESSIONAL SERVICE AND EXPERIENCE**

1985–1986	BAYER CHEMICAL CO. Researcher. Performed biochemical analysis on locust flight muscle metabolism.	LEVERKUSEN, GERMANY
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1997–present	Associate Editor for <i>Small Business Economics</i> .
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1997–present	Associate Editor for <i>Journal of Private Equity</i> .
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1997–present	Associate Editor for <i>Journal of Finance</i> .
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1997–present	Western Finance Association Meetings Program Committee.
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1998	Program Committee, <i>Journal of Financial Economics</i> conference on research methodologies in finance.
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2006–present	Associate Editor for <i>Journal of Economic Literature</i> .
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2010–present	Associate Editor for <i>Journal of Economics and Management Strategy</i> .
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Referee for the *Journal of Financial Economics*, *Journal of Finance*, *Journal of Political Economy*, *Quarterly Journal of Economics*, *Rand Journal of Economics*, *Review of Financial Studies*, *American Economic Review*, *Journal of Public Economics*, *Journal of Corporate Finance*, *Journal of Small Business Management*, *Economic Letter*, *Small Business Economics*, *Journal of Business Venturing*, *Journal of Small Business Finance*, *Journal of Business*, *Journal of Law, Economics, and Organizations*, and *Journal of Law and Economics*.

Reviewer for reports and proposals for the National Science Foundation.

Reviewer for reports and proposals for the Securities and Exchange Commission.

## **COMMUNITY SERVICE**

Board Member, Beth Israel Deaconess Hospital, (2014-2015).

Board Member, Friends of Harvard Track, (2014-2015).



Board Member, USA Triathlon Foundation, (2015)  
Beth Israel Deaconess Wellness Center Advisory Board (2013-2015)  
Vice President, Treasurer, and Executive Board Member, Harvard Hillel (1995–2010).  
Board Member, Camp Yavneh (2007–2010).  
Ivy League Eikeden Committee (1997–2010)  
Young Israel of Brookline, Internet Advisory Board (2000–2001).  
Technion Institute of Management: Boston Advisory Board (2000).  
Board Member, Anshe Shalom B’nei Israel Congregation (1993–1995).

### **CONSULTING PROJECTS**

Apax Venture Partners, 2003.  
Battery Venture Partners, 2001.  
Bessemer Venture Partners, 1998.  
Deloitte and Touche, 2003.  
Department of Energy, Idaho Falls National Laboratory, 1994–1995.  
Department of Energy, Savannah River National Laboratory, 1995–1997.  
Department of Energy, Butte, Montana National Laboratory, 1997–1998.  
E.M. Warburg, Pincus, 1997.  
Ernst and Young, 2002.  
GTCR Golder Rauner, 1999.  
Jerusalem Venture Partners, 2001.  
Montana Science and Engineering, Inc., 1997.  
Patricoff & Co., 1995.  
Phillip’s Petroleum, 1998, 2000, 2001, 2002.  
PriceWaterhouse Coopers, 2001.  
RogersCasey Investment Advisors, 1994.  
Salomon Smith Barney, 1999–2003.  
TA Associates, 2015.  
Thermo Electron Corporation, 1994–1997.  
VentureOne, 1995.

### **BOARDS OF DIRECTORS AND ADVISORY BOARDS**

Evergreen Partners, 2005–2015.  
Gemini Venture Capital, 2003–2015.  
Highland Capital Consumer Fund, 2007–2017.  
Khosla Ventures, 2009-2017.  
Knightsbridge Investment Advisers, 1995–2012.  
Mercanteo, 1999.  
New Capital Partners, 2000–2001.  
Onpoint Technology Ventures, 2003–2015.  
OnTheFrontier.com, 2000–2001.  
Spur Capital Partners, 2002–2017.  
Triple Point Capital, 2003.  
ZEFER, 1998.

### **GRANTS AND AWARDS**

National Science Foundation Grant, 1994–1997, “Financing New Business Formation.”

National Science Foundation Grant, 2002–2005, “Corporate Governance and Firm Performance.”  
National Institute of Standards and Technology, Advanced Technology Program, 1996–1997, “Venture Capital and the Financing of Emerging Technologies.”  
Newcomen Business History Paper Prize, 1994.  
American Association of Individual Investors Award for Best Paper on Investments, at the Western Finance Association Meeting, 1998.  
Journal of Financial Economics, Fama-DFA Price, Second Prize, 2008.  
Journal of Finance, Smith Breeden Distinguished Paper Prize, 1998.  
Rodney White Center for Financial Research, Best Paper Prize, 2002.  
MBA Class of 1961 Fellow, 1997–1998.

### **ATHLETICS**

Alternate on the 1988 Olympic team in the marathon. Finished fourth in the Olympic trials. Qualified for 1984, 1988, 1992 Olympic marathon trials. Cross-Country All-American. Academic All-American. Set World Junior Record in the marathon (1983). Bronze medalist in 1985 World University Games in Japan (marathon). Qualified for two US cross-country teams and competed in the World Championships. Set Harvard Records in the 5,000 and 10,000 meters. Triathlon Age Group All-American 2007, 2009, 2010, 2013, 2014. Ranked second in the world by World Triathlon Corporation in Age Group at the Ironman 70.3 distance in 2014. Competed in ITU Age Group World Championships (2007, 2015). Competed in Ironman 70.3 World Championship (2007). Competed in Ironman World Championships in Kailua Kona (2009, 2010).

## **Paul A. Gompers**

### **Expert Depositions and Testimony for Prior Four Years**

Deposition of Paul A. Gompers in Kirk Dahl, et al. v. Bain Capital Partners, LLC, et al., United States District Court for the District of Massachusetts, Case No. 1:07-cv-12388-EFH (February 28, 2014).

Arbitration Testimony of Paul A. Gompers in Diana Peterson v. Jordan Clements, on behalf of Diana Peterson, American Arbitration Association, Arbitration No. 77 148 Y 00251 13 (March 6, 2014).

Deposition of Paul A. Gompers in Anwar, et al. v. Fairfield Greenwich Limited, et al., on behalf of Citco, United States District Court for the Southern District of New York, Master File No. 09-cv-118 (VM) (March 31, 2014).

Testimony of Paul A. Gompers in Kenneth J. Novack, as Representative of the Former Shareholders of Retail Convergence, Inc. v. GSI Commerce, Inc., et al., Commonwealth of Massachusetts Superior Court Department of the Trial Court, Civil Action No. SUCV2011-2086-BLS2 (April 24, 2014).

Deposition of Paul A. Gompers in Justin M. Scott v. Putnam, LLC d/b/a Putnam Investments, et al., on behalf of Putnam and Marsh & McLennan, United States District Court for the District of Massachusetts, Case No. 1:11-cv-11082-RWZ (May 6, 2014).

Deposition of Paul A. Gompers in HealthCare Royalty Partners, L.P., v. Shionogi, Inc., on behalf of HealthCare Royalty Partners, L.P., Supreme Court of the State of New York, County of New York, Case No. 650424/2012 (July 9, 2014).

Deposition of Paul A. Gompers in Amazon.com, Inc. & Subsidiaries v. Commission of Internal Revenue, on behalf of Commission of Internal Revenue, United States Tax Court, Tax Court Docket No. 31197-12 (August 20, 2014).

Testimony of Paul A. Gompers in In Re Groupon Inc. Securities Litigation, on behalf of Groupon, Inc., United States District Court for the Northern District of Illinois, Case No. 12-cv-2450 (September 11, 2014).

Deposition of Paul A. Gompers in In Re Marriage of Martha Ehmann Conte and Jean-Pierre L. Conte, on behalf of Martha Ehmann Conte, Superior Court of the State of California, City and County of San Francisco, Case No. FDI-10-773039 (October 30, 2014).

Deposition of Paul A. Gompers in City of Austin Police Retirement System, Individually and on Behalf of All Others Similarly Situated v. Kinross Gold Corporation, et al., on behalf of Kinross Gold Corporation, United States District Court for the Southern District of New York, Case No. 1:12-cv-01203-VEC (November 11, 2014).

Testimony of Paul A. Gompers in In Re Marriage of Martha Ehmann Conte and Jean-Pierre L. Conte, on behalf of Martha Ehmann Conte, Superior Court of the State of California, City and County of San Francisco, Case No. FDI-10-773039 (December 15, 2014).

Testimony of Paul A. Gompers in Amazon.com, Inc. & Subsidiaries v. Commission of Internal Revenue, on behalf of Commission of Internal Revenue, United States Tax Court, Tax Court Docket No. 31197-12 (December 16, 2014).

## **Paul A. Gompers**

### **Expert Depositions and Testimony for Prior Four Years**

Deposition of Paul A. Gompers in In Re Dole Food Co, Inc., Stockholder Litigation and In Re Appraisal of Dole Food Company, Inc., Court of Chancery of the State of Delaware, Case Nos. 8703-VCL and 9079-VCL (December 19, 2014).

Deposition of Paul A. Gompers in Dr. David Beach and Christopher Kelly, et al. v. Citigroup Alternative Investments LLC and Citigroup Inc., on behalf of Citigroup Alternative Investments, United States District Court for the Southern District of New York, Case No. 12-cv-7717(GHV) (January 22, 2015).

Deposition of Paul A. Gompers in Ellen Pao v. Kleiner Perkins Caufield & Byers LLC, et al., on behalf of Kleiner Perkins Caufield & Byers LLC, Superior Court of the State of California, City and County of San Francisco, Case No. CGC-12-520719 (February 9, 2015).

Testimony of Paul A. Gompers in In Re Dole Food Co, Inc., Stockholder Litigation and In Re Appraisal of Dole Food Company, Inc., Court of Chancery of the State of Delaware, Case Nos. 8703-VCL and 9079-VCL (March 2, 2015).

Testimony of Paul A. Gompers in Ellen Pao v. Kleiner Perkins Caufield & Byers LLC, et al., on behalf of Kleiner Perkins Caufield & Byers LLC, Superior Court of the State of California, City and County of San Francisco, Case No. CGC-12-520719 (March 19, 2015).

Deposition of Paul A. Gompers in Carpenters Pension Trust Fund of St. Louis, et al. v. Barclays PLC, et al., on behalf of Barclays PLC, United States District Court for the Southern District of New York, Case No. 1:12-cv-5329-SAS (March 25, 2015).

Deposition of Paul A. Gompers in In Re Goldman Sachs Group, Inc. Securities Litigation, on behalf of The Goldman Sachs Group, Inc., United States District Court for the Southern District of New York, Case No. 1:10-cv-03461-PAC (April 30, 2015).

Deposition of Paul A. Gompers in In Re MiMedx Group, Inc. Securities Litigation, on behalf of MiMedx Group, Inc., United States District Court for the Northern District of Georgia, Atlanta Division, Civil Action No. 1:13-cv-03074-TWT (June 3, 2015).

Deposition of Paul A. Gompers in Carpenters Pension Trust Fund of St. Louis, et al. v. Barclays PLC, et al., on behalf of Barclays PLC, United States District Court for the Southern District of New York, Case No. 1:12-cv-5329-SAS (June 18, 2015).

Testimony of Paul A. Gompers in Carpenters Pension Trust Fund of St. Louis, et al. v. Barclays PLC, et al., on behalf of Barclays PLC, United States District Court for the Southern District of New York, Case No. 1:12-cv-5329-SAS (July 15, 2015).

Deposition of Paul A. Gompers in In Re Goldman Sachs Group, Inc. Securities Litigation, on behalf of The Goldman Sachs Group, Inc., United States District Court for the Southern District of New York, Case No. 1:10-cv-03461-PAC (September 9, 2015).

Deposition of Paul A. Gompers in In Re Marriage of Martha Ehmann Conte and Jean-Pierre L. Conte, on behalf of Martha Ehmann Conte, Superior Court of the State of California, City and County of San Francisco, Case No. FDI-10-773039 (September 25, 2015).

## **Paul A. Gompers**

### **Expert Depositions and Testimony for Prior Four Years**

Deposition of Paul A. Gompers in In Re Intercept Pharmaceuticals, Inc. Securities Litigation, on behalf of Intercept Pharmaceuticals, Inc., United States District Court for the Southern District of New York, Civil Action No. 1:14-cv-01123-NRB (October 2, 2015).

Deposition of Paul A. Gompers in In Re NII Holdings, Inc. Securities Litigation, on behalf of NII Holdings, Inc., United States District Court for the Eastern District of Virginia, Alexandria Division, Case No. 1:14-cv-00227-LMB-JFA (October 23, 2015).

Deposition of Paul A. Gompers in David M. Loritz, et al. v. Exide Technologies, et al., on behalf of the individual defendants, United States District Court for the Central District of California, Master File No. 2:13-cv-02607-SVW-E (November 3, 2015).

Deposition of Paul A. Gompers in Första AP-Fonden and Danske Invest Management A/S, Individually and on Behalf of All Others Similarly Situated v. St. Jude Medical, Inc., et al., on behalf of St. Jude Medical, Inc., United States District Court for the District of Minnesota, Civil No. 12-3070 (JNE/HB) (November 6, 2015).

Deposition of Paul A. Gompers in In Re Petrobras Securities Litigation, on behalf of the individual defendants, United States District Court for the Southern District of New York, Case No. 14-cv-9662 (November 11, 2015).

Testimony of Paul A. Gompers in Andrew Segal, M.D. v. Genitrix, LLC, H. Fisk Johnson, III and Stephen Rose, on behalf of the individual defendants, Commonwealth of Massachusetts Superior Court Department, Civil Action No. 09-776-G (November 18, 2015).

Deposition of Paul A. Gompers in In Re Montage Technology Group Limited Securities Litigation, on behalf of Montage Technology Group Limited, United States District Court for the Northern District of California, Case No. 3:14-cv-00722-SI (January 20, 2016).

Deposition of Paul A. Gompers in In Re Symbol Technologies, Inc. Securities Litigation, on behalf of Symbol Technologies, Inc. and the individual defendants, United States District Court for the Eastern District of New York, Civil Action No. 05-CV-3923-DRH (January 27, 2016).

Deposition of Paul A. Gompers in In Re Amgen, Inc. Securities Litigation, on behalf of Amgen, Inc., United States District Court for the Central District of California, Western Division, Case No. CV 07-2536 PSG (PLAx) (February 25, 2016).

Deposition of Paul A. Gompers in In Re Comverge, Inc. Shareholders Litigation, on behalf of the Comverge directors, Court of Chancery of the State of Delaware, Consolidated C.A. No. 7368-VCP (March 24, 2016).

Deposition of Paul A. Gompers in Musashi, L.L.C. and W.R. Huff Asset Management Co., L.L.C. v. Virgin Media Inc., on behalf of Musashi, L.L.C. and W.R. Huff Asset Management Co., L.L.C., Superior Court of New Jersey, Law Division: Morris County, Civil Action No. MRS-L-734-13 (June 1, 2016).

## **Paul A. Gompers**

### **Expert Depositions and Testimony for Prior Four Years**

Deposition of Paul A. Gompers in Spin Master Ltd. v. Bureau Veritas Consumer Products Services, Inc. and Eurofins Product safety Labs, Inc., on behalf of Bureau Veritas Consumer Products Services, Inc., United States District Court for the Western District of New York, Civil Action No. 08 CV 0923 (August 8, 2016).

Arbitration Testimony of Paul A. Gompers in Todd M. Rainville v. Symmetric Capital, LLC, et al., on behalf of Symmetric Capital, LLC, et al., American Arbitration Association, Arbitration No. 01-15-003-8498 (August 2016).

Deposition of Paul A. Gompers in Alan Willis, Individually and on Behalf of All Others Similarly Situated v. Big Lots, Inc., et al., on behalf of Big Lots, Inc. and the individual defendants, United States District Court for the Southern District of Ohio, Eastern Division, Case No. 2:12-cv-00604-MHW-NMK (August 25, 2016).

Arbitration Testimony of Paul A. Gompers in Michael Christopher v. ArcLight Capital Holdings, LLC, et al., on behalf of Michael Christopher, Judicial Arbitration and Mediation Services, Arbitration No. 1400015869 (October 6, 2016).

Deposition of Paul A. Gompers in ITW Global Investments Inc. v. American Industrial Partners Capital Fund IV, L.P., et al., on behalf of ITW Global Investments Inc., Superior Court of the State of Delaware in and for New Castle County, C.A. No. N14C-10-236 (JRJ) (November 3, 2016).

Deposition of Paul A. Gompers in Keith Thomas, Richard Hayes, Herb Smith, and Oklahoma Police Pension & Retirement System v. Magnachip Semiconductor Corp., Sang Park, Tae Young Hwang, Margaret Sakai, R. Douglas Norby, Ilbok Lee, Nader Tavakoli, Randal Klein, Michel Elkins, Avenue Capital Management II, L.P., Barclays Capital Inc., Deutsche Bank Securities Inc., Citigroup Global Markets Inc., UBS Securities LLC, and Needham and Company, LLC, on behalf of Avenue Capital Management II, L.P., United States District Court for the Northern District of California, Case No. 3:14-cv-01160-JST (November 16, 2016).

Deposition of Paul A. Gompers in Dr. Joseph F. Kasper v. AAC Holdings, Inc. et al., on behalf of AAC Holdings, Inc. and the individual defendants, United States District Court for the Middle District of Tennessee, Case No. 3:15-cv-00923 (January 23, 2017).

Deposition of Paul A. Gompers in In re Facebook, Inc., IPO Securities and Derivative Litigation, on behalf of Facebook, Inc. and its officers and directors named in the suit, United States District Court for the Southern District of New York, MDL No. 12-2389 (March 28, 2017).

Deposition of Paul A. Gompers in Louisiana Municipal Police Employees' Retirement System, et al. v. Green Mountain Coffee Roasters, Inc. et al., on behalf of Green Mountain Coffee Roasters, Inc., United States District Court for the District of Vermont, Civil Action No. 2011-CV-00289 (August 3, 2017).

Deposition of Paul A. Gompers in Ohio Public Employees Retirement System, On Behalf of Itself and All Others Similarly Situated v. Federal Home Loan Mortgage Corporation a/k/a Freddie Mac, et al., on behalf of Federal Home Loan Mortgage Corporation, United States District Court for the Northern District of Ohio, Eastern Division, Civil Action No. 4:08-CV-00160 (September 15, 2017).



## **Paul A. Gompers**

### **Expert Depositions and Testimony for Prior Four Years**

Deposition of Paul A. Gompers in Hudson Bay Master Fund Ltd. v. Patriot National, Inc. and Steven M. Mariano and CVI Investments, Inc. v. Patriot National, Inc., on behalf of Patriot National, Inc. and Steven M. Mariano, United States District Court for the Southern District of New York, Case Nos. 16-cv-2767 (GBD) (RLE) and 16-cv-2787 (GBD) (RLE) (October 4, 2017).

Testimony of Paul A. Gompers in Musashi, L.L.C. and W.R. Huff Asset Management Co., L.L.C. v. Virgin Media Inc., on behalf of Musashi, L.L.C. and W.R. Huff Asset Management Co., L.L.C., Superior Court of New Jersey, Law Division: Morris County, Civil Action No. MRS-L-734-13 (October 18, 2017).

Deposition of Paul A. Gompers in Winson Tang v. Lindsay Rosenwald, Michael Weiss, Opus Point Partners, LLC, Mustang Bio, Inc. (aka Mustang Therapeutics, Inc.), City of Hope, and Fortress Biotech, Inc. (f/k/a Coronado Biosciences, Inc.), on behalf of Opus Point Partners, LLC, Mustang Therapeutics, Inc., Fortress Biotech, Inc., Lindsay Rosenwald, and Michael Weiss, Superior Court of the State of California, County of Los Angeles, Case No. BC 607346 (October 23, 2017).

Deposition of Paul A. Gompers in EWC Holdings, Inc. v. Princeton Ventures II, LLC and Brazos/EWC, LLC, on behalf of EWC Holdings, Inc., Court of Chancery of the State of Delaware, C.A. No. 12519-VCL (November 7, 2017).

Deposition of Paul A. Gompers in Securities and Exchange Commission v. AVEO Pharmaceuticals, Inc., Tuan Ha-Ngoc, David Johnston, and William Slichenmeyer, on behalf of the individual defendants, United States District Court for the District of Massachusetts, Case No. 1:16-cv-10607-NMG (December 13, 2017).

Deposition of Paul A. Gompers in Ralph S. Janvey, In His Capacity as Court-Appointed Receiver for the Stanford Receivership Estate, and the Official Stanford Investors Committee v. Proskauer Rose, LLP, Chadbourne & Parke, LLP, and Thomas V. Sjoblom, on behalf of Proskauer Rose, LLP and Thomas V. Sjoblom, United States District Court for the Northern District of Texas, Dallas Division, Civil Action No. 3:13-cv-00477-N (January 22, 2018).

Arbitration Testimony of Paul A. Gompers in Credit Agricole Corporate and Investment Bank (f/k/a Calyon Bank New York Branch), et al. v. Black Diamond Capital Management LLC, et al., on behalf of Black Diamond Capital Management LLC, BDC Finance LLC, and Black Diamond CLO 2006-1, American Arbitration Association, Arbitration No. 01-17-0007-1196 (February 6, 2018).

## **List of Documents Considered**

### **ACADEMIC ARTICLES**

- Bradford Cornell and R. Gregory Morgan, “Using Finance Theory to Measure Damages in Fraud on the Market Cases,” *UCLA Law Review*, Vol. 37 (1990).

### **ANALYST REPORTS**

- Backup Materials for the Expert Report of Zachary Nye, Ph.D., December 21, 2017.

### **BOOKS**

- John Y. Campbell, Andrew W. Lo, and A. Craig MacKinlay, *The Econometrics of Financial Markets*, (Princeton University Press, 1997).
- David H. Kaye and David A. Freedman, “Reference Guide on Statistics” in *Reference Manual on Scientific Evidence*, Third Edition (The National Academies Press, 2011).

### **DEPOSITIONS**

- Deposition of Zachary Nye, Ph.D., February 2, 2018.

### **EARNINGS CALLS**

- Backup Materials for the Expert Report of Zachary Nye, Ph.D., December 21, 2017.

### **EXPERT REPORTS AND EXHIBITS**

- Expert Report of Zachary Nye, Ph.D., filed on December 21, 2017.
- Backup Materials for the Expert Report of Zachary Nye, Ph.D., December 21, 2017.

### **LEGAL DOCUMENTS**

- *Comcast Corp. v. Behrend*, 133 S. Ct. 1426, 1431 (2013).
- Complaint, *United States of America v. FCA US LLC, Fiat Chrysler Automobiles N.V., V.M. Motori S.P.A., and V.M. North America, Inc.* (E.D. Mich. May 23, 2017).
- Consent Order, In re: FCA US LLC AQ14-003 (Recall Nos. 13V-528 and 13V-529), NHTSA Recall Nos. 13V-038, 13V-252, 13V-527, 14V-154, 14V-373, 14V-391, 14V-438, 14V-567, 14V-634, 14V-635, 14V-749, 14V-795, 14V-796, 14V-817, 15V-041, 15V-046, 15V-090, 15V-114, 15V-115, 15V-178, and 15V-290, United States



Department of Transportation, National Highway Traffic Safety Administration, July 26, 2015.

- Fourth Amended Complaint for Violations of the Federal Securities Laws, *Gary Koopmann, Timothy Kidd and Victor Pirnik, Individually and on Behalf of All Others Similarly Situated v. Fiat Chrysler Automobiles N.V., FCA US LLC, Sergio Marchionne, Scott Kunselman, Michael Dahl, Steve Mazure, and Robert E. Lee*, Civ. Action No:15-cv-07199-JMF (S.D.N.Y. August 24, 2017).
- Opinion and Order, *Victor Pirnik et al. v. Fiat Chrysler Automobiles N.V. et al.*, Civ. Action No. 15-cv-07199-JMP (S.D.N.Y. October 5, 2016).
- *Takata Airbag Defects: Hearing before the Senate Commerce, Science and Transportation Committee*, Senate, 113th Cong. 2 (2014).

## **NHTSA REPORTS**

- Part 573 Safety Recall Report 14V-391, National Highway Traffic Safety Administration, July 1, 2014.
- Part 573 Safety Recall Report 14V-634, National Highway Traffic Safety Administration, October 7, 2014.
- Part 573 Safety Recall Report 14V-749, National Highway Traffic Safety Administration, November 21, 2014.
- Part 573 Safety Recall Report 15V-115, National Highway Traffic Safety Administration, February 24, 2015.

## **PRESS RELEASES**

- “Separation of Ferrari from FCA Completed,” Fiat Chrysler Automobiles Press Release, January 3, 2016.
- “EPA Notifies Fiat Chrysler of Clean Air Act Violations,” EPA News Release, January 12, 2017.
- “FCA US Statement in Response to DOJ-ENRD Filing,” Fiat Chrysler Automobiles Press Release, May 23, 2017.
- Backup Materials for the Expert Report of Zachary Nye, Ph.D., December 21, 2017.

## **PUBLIC PRESS**

- Backup Materials for the Expert Report of Zachary Nye, Ph.D., December 21, 2017.
- Select Factiva major business publications and major news wires with search terms “Fiat or Chrysler” from 2/26/16 – 3/1/16.
- Bloomberg Law publications with search term “Fiat or Chrysler” from 2/26/16 – 3/1/16.

## SEC FILINGS

- SEC Edgar Database.
- Fiat Chrysler Form F-1 filed on October 10, 2014.
- Fiat Chrysler Form 6-K filed on November 6, 2014.
- Fiat Chrysler Form 6-K Filed May 7, 2015.
- Fiat Chrysler Form 6-K filed on October 28, 2015.
- Fiat Chrysler Form 20-F filed on February 29, 2016.

## WEBSITES

- “Brands and Businesses,” Fiat Chrysler Automobiles, <https://www.fcagroup.com/en-US/group/brands/Pages/default.aspx>, accessed on May 22, 2017.
- “FCA at a Glance,” Fiat Chrysler Automobiles, <https://www.fcagroup.com/en-US/group/Pages/group.aspx>, accessed on May 17, 2017.

Note: In addition to the documents on this list, I considered all documents cited in my report and my exhibits to form my opinions.